EXHIBIT A-1

Montana Department of Transportation
serving you with pride

Brian Schweitzer, Governor

Missoula District Office
2100 W Broadway
PO Box 7039
Missoula, MT 59807-7039

June 7, 2006

Benjamin Howell, Planner I
Ravalli County Planning
215 South 4th Street; Suite F
Hamilton, MT 59840

Subject: Aspen Springs Subdivision - variance requests

Benjamin, thanks for writing the Montana Department of Transportation (MDT) regarding the proposed eight variance request for the subject subdivision in Ravalli County.

My comments are as follows:

- **Variance request #1 - #6:** no comments
- **Variance request #7:** At this time it appears that nearly all traffic using Lower Woodchuck Road will be generated by the Aspen Springs Subdivision. The developer should be required to improve roadway to meet the new county standards.
- **Variance request #8:** Preliminary numbers for Average Daily Traffic Volumes from The Aspen Springs Subdivision are anticipated to be 6000+ trips per day. At full build out the proposed subdivision could be generating up to 70% of the traffic on Eight Mile Creek road. The roadway should be upgraded to meet the new county standards before full build out occurs.

Sincerely,

Glen Cameron
Missoula District Traffic Engineer

copies: Dwane Kailey, Missoula District Administrator
Ryan Salisbury, WGM Group, P.O. Box 16027, Missoula, MT 59808-6027

EXHIBIT A-2

JUN 2 6 2006
IC-06-06-994
Ravalli County Planning Dept.

RAVALLI COUNTY ATTORNEY

205 Bedford Street, Suite C, Hamilton, MT 59840-2853
Phone (406) 375-6222 Fax (406) 375-6328

Memorandum

TO: Karen Hughes, Ravalli County Planning Department
Ben Howell, Ravalli County Planning Department

FROM: George Corn GC

DATE: June 26, 2006

RE: Aspen Springs . . . comments

Karen and Ben,

Attached is a copy of a letter from Dwane Kailey regarding the Aspen Springs matter. Does this letter answer your questions or do I need to obtain more information? Please let me know, and I will follow up accordingly. Thank you.

GHC/jw

Montana Department of Transportation
serving you with pride

Jim Lynch, Director
Brian Schweitzer, Governor

Missoula District Office
2100 W Broadway
PO Box 7039
Missoula, MT 59807–7039

June 14, 2006

George H. Corn
County Attorney
Ravalli County Courthouse
205 Bedford Street, Suite C
Hamilton, MT 59840

Subject: Aspen Springs Development

George, thank you for writing me in regards to this development. Let me apologize that we haven't responded to the county sooner on this issue.

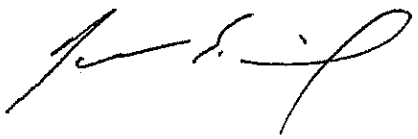
First off, MDT is working on the plans for reconstructing the section of S-203 from approximately Bull Run to the intersection of US93. We currently have a tentative letting date scheduled for January 2008. This project does include improving the intersection of Eight Mile Road and S-203. The project manager for this project is actually Bill Squires in Helena. However, feel free to correspond with myself or Shane Stack.

In regards to the impact of Aspen Springs on our design, we have reviewed the Traffic Impact Study (TIS) for the development and it has caused us modify the design. To be specific, we originally designed a standard single lane round-about. This design accommodated what we anticipated the 20 year growth to be. However, after reviewing the TIS for Aspen Springs we have had to add two right turn slip lanes onto the round-about. I have attached a cost estimate detailing the cost of this modification. The total based on current inflation and pricing for the area is $88,182. It is our belief this additional cost is attributable to the Aspen Springs development and should be assessed to that development. However, state law prohibits MDT from assessing the fee as this development does not directly access at this intersection.

In regards to the intersection of S-203 and US93, I do believe the developments of Aspen Springs and Legacy Ranch will have drastic impacts on this intersection. Due to the proximity of the R/R and improvements at this intersection, mitigation such as a dedicated right turn lane will be extremely expensive. I believe the Department and Ravalli County should work with the developers to assess their respective impacts to this intersection as well as appropriate mitigation. I further believe we should strive to find a funding source for these improvements. The Department has no identified available funding for improvements within this area beyond the already programmed projects.

George, I hope this answers your questions. If you wish to discuss this further, please feel free to contact me.

Sincerely,



Dwane E. Kailey, P.E.
District Administrator

copies: Sandy Straehl
Karen Hughes
Ben Howell
Ravalli County Commissioners
Dave Ohnstad
File

Montana Department of Transportation

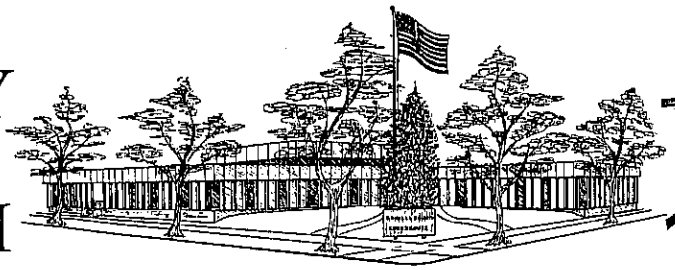
Preliminary Estimate

Project Title:	FLORENCE - EAST	Prepared by:	W. M. Squires ("District Unit Prices" determined by review of recent bid tabs)
Project Number:	BR-STPS 2203-1(11)10	Date:	June 13, 2006
Project Length:	N/A	Location:	RAVALLI CO.
Des. Super. Approval:		Type of Work:	**Additional cost to provide SB-to-WB &**
Project Cont. Number:	4854	~~D.A. Approval.:~~	**EB-to-SB "slip lanes" around roundabout**

Item Number	Quantities	Description	Unit	Average Bid Prices		District Unit Prices	
				Unit Prices Dollars	Amount Dollars	Unit Prices Dollars	Amount Dollars
104100000	100	MISCELLANEOUS WORK	UNIT	$1.00	100		100
203200000	4200	EXCAVATION-UNCLASS BORROW	M3	$3.61	15,162	$4.00	16,800
301270000	728	CRUSHED AGGREGATE COURSE	M3	$19.32	14,065	$24.00	17,472
301440010	2800	COVER - TYPE 1	M2	$0.41	1,148	$0.50	1,400
401080000	576	PLANT MIX BIT SURF GR S - 19 MM NV	MT	$16.09	9,268	$24.00	13,824
401100000	5.1	DUST PALLIATIVE	MT	$92.93	474	$150.00	765
401200000	9	HYDRATED LIME	MT	$118.98	1,071	$150.00	1,350
402088000	31.1	ASPHALT CEMENT PG 64-28	MT	$259.83	8,081	$380.00	11,818
402200000	644	EMULSIFIED ASPHALT SS-1	L	$0.23	148	$0.70	451
402225000	5.1	EMULSIFIED ASPHALT CRS-2P	MT	$245.10	1,250	$450.00	2,295
		Subtotal			50,767		66,275
	0%	Traffic Control			0		0
	0	Traffic Control Devices	Units	0.00	0		0
	0	Flagmen	Hours	0.00	0		0
	0	Pilot Car	Hours	0.00	0		0
		Subtotal			50,767		66,275
	8%	Mobilization			4,061		5,302
		Subtotal			54,828		71,577
	15%	Contingency			8,224		10,737
		Subtotal			63,053		82,314
	3%	Inflation	Years	2.33	4,496		5,869
		Construction Total			67,548		88,182
	10%	Construction Engineering			6,755		0
		Total			74,303		88,182

EXHIBIT A-3

COUNTY OF RAVALLI



OF MONTANA

The Bitterroot Valley

Hamilton, Montana 59840

ROAD & BRIDGE DEPARTMENT

244 FAIRGROUNDS ROAD, HAMILTON, MONTANA 59840

RECEIVED

MAY 30 2006

IC-06-05-843

Ravalli County Planning Dept.

DATE 31 MAY 2006

TO RENEE VAN HOVEN / BEN HOWELL, PLANNING DEPARTMENT

FROM DAVID H. OHNSTAD, COUNTY ROAD SUPERVISOR

SUBJECT ASPEN SPRINGS SUBDIVISION

PRELIMINARY DESIGN REVIEW

Attached please find analysis and comment from the county's consulting civil engineers relative to the preliminary design submittal for the proposed Aspen Springs subdivision. The Road & Bridge Department approves this preliminary design, with the understanding that certain technical issues will be addressed through the final design process. We note that a Design Exception is requested for a section of Lower Woodchuck Road (please see following recommendation).

DESIGN EXCEPTIONS

Attached please find copy of the adopted policy on Design Exception Practices along with the Schedule for Design Exception. In requesting this exception, the Aspen Springs project owner will need to complete this schedule, identify any proposed mitigation, and submit it to the Road & Bridge Department for review.

VARIANCE REQUESTS

In response to the requests for variance from the Ravalli County Subdivision Regulations, we offer the following; Request #1 (project phasing) - No Comment; Request #2 (no-build zones) - No Comment; Request #3 (gas line no-build zone) - No Comment; Request #4 (lot size) - No Comment; Request #5 (flag lots) - No Comment; **Request #6 (review under new standards) - Recommend Approval; Request #7 (improvements to Lower Woodchuck Road) - Recommend Denial; Request #8 (improvements to Eight Mile Creek Road) - Recommend Denial.**

Professional Consultants Inc.
Unmatched Experience. Uncompromising Standards.

3115 Russell Street • PO Box 1750 • Missoula, Montana 59806 • 406-728-1880 • fax 406-728-0276

May 24, 2006

Dave Ohnstad
Ravalli County Road and Bridge Department
244 Fairgrounds Road
Hamilton, MT 59840

RE: Aspen Springs

Our office has completed the review of the preliminary plans for streets, grading and drainage submitted to our office for the Aspen Springs Subdivision dated May 18, 2006. Included in the review was a letter from WGM Group, street plan and profile drawings, and preliminary grading and drainage plans. We have reviewed the subdivision in accordance with AASHTO Guidelines for Geometric Design of Highways and Streets and the Ravalli County Subdivision Regulations. The current review consisted of ensuring the comments made during our April 24 letter were addressed by the developer.

All of the issues of our April 24the review letter have been addressed. A variance request from the design standard for the existing Lower Woodchuck Road 15 mph curve has been requested by the developer. Should this variance be granted, we recommend mitigation be designed and installed in accordance with the Manual of Uniform Traffic Control Devices and the AASHTO "Green Book".

The final design/construction plans for the streets will be reviewed to ensure compliance with the Ravalli County Subdivision Standards.

Sincerely,
Professional Consultants, Inc

Matthew S. Smith, P.E.
cc. Ravalli County Planning Office

WGM GROUP, INC.
3021 Palmer • PO Box 16027 • Missoula, MT 59808-6027

ENGINEERING
SURVEYING
PLANNING
Phone: (406)728-4611
Fax: (406)728-2476
www.wgmgroup.com

- DATE: 5/22/2006
- TO: Ravalli County Planning Department
- FROM: Mark Bancale, P.E.
- RE: Aspen Springs Traffic Analysis

WGM Group, Inc. (WGM) prepared a traffic impact study (TIS), dated May, 2005, for the Aspen Springs subdivision. The Ravalli County Planning Department recently reviewed and commented on this TIS. This memo addresses the comments made by Ravalli County. The County's comments are repeated below in italics, followed by WGM's response.

- *Page 4, 2015 No-Build Traffic Volumes, states that WGM used a 6% growth rate to project future traffic on the Eastside Highway based on historic MDT data. Please explain why a 2% growth rate was used to project future traffic on Eight Mile Creek Road and what the growth rate was for Lower Woodchuck Road.*

  As stated, WGM used a 6% growth rate on Eastside Highway to project traffic from 2005 to 2015. This is a very high sustained growth rate for peak-hour traffic. The growth rate on Eight Mile Creek Road was assumed to be lower than this because this road will see increased traffic only as a result of development increases in a relatively small "traffic drainage" area. The Eastside Highway, on the other hand, collects traffic growth from development throughout the valley between Florence and Hamilton, and therefore would be expected to experience a higher rate of growth. Historic traffic data was not available to calculate an actual growth rate on Eight Mile Creek Road; therefore, 2% per year was assumed. This assumption was supported by the fact that no other developments in the Eight Mile Creek Road area had been submitted for planning review at the time the Aspen Springs TIS was being prepared.

  Other than the Aspen Springs site-generated traffic, no traffic growth was assumed (0% growth rate) on Lower Woodchuck Road north of Eight Mile Creek Road. Because of the very low peak-hour volume existing on this roadway, any assumed growth rate would result in extremely little added traffic on this road and no impact on traffic operations or level of service (LOS) on Lower Woodchuck Road, as presented in the TIS.

- *Figures 3 and 4, the existing ADT* [Average Daily Traffic] *on Eight Mile Creek is 2,049 and the 2015 no-build projected ADT is 2,500. This seems low considering how many developments are proposed along Eight Mile Creek Road.*

At the time the TIS was prepared, no other developments were proposed on Eight Mile Creek Road. Had there been knowledge of additional developments, the projected traffic generated by these developments would have been directly accounted for in the TIS and added to the 2015 no-build ADT and peak hour traffic volumes.

Following completion of the TIS (May 2005), a number of projects were discussed (though not necessarily formally submitted) that would add traffic, if built, to Eight Mile Creek Road . In April 2006, WGM prepared a memorandum summarizing the ADT that each of these developments would add to Eight Mile Creek Road. This memorandum was included in the original subdivision packet, and is attached to this document for reference.

WGM GROUP, INC.
3021 Palmer • PO Box 16027 • Missoula, MT 59808-6027

ENGINEERING
SURVEYING
PLANNING
Phone: (406)728-4611
Fax: (406)728-2476
www.wgmgroup.com

DATE: April 13, 2006

TO: Wesmont Builders-Developers, Inc.

FROM: Ryan J. Salisbury, P.E.

RE: Aspen Springs
Adjacent Development Traffic

Average Daily Traffic was calculated from the ITE Trip Generation Manual for all known developments that would benefit from the improvements to Eight Mile Creek Road. These values are shown in Table 1.

Table 1: ADT for Developments Utilizing Eight Mile Creek Road

Development	Dwelling Units	ADT	% of Total ADT
Existing Traffic on 8 Mile Ck.		2,049	19.47%
Aspen Springs	**	5,974	56.77%
Saddle Hills	20	191	1.82%
Castle Heights	5	48	0.46%
Riverview Orchards	12	115	1.09%
Gunshy Ridge Three	10	96	0.91%
Gunshy Ridge	19	182	1.73%
Riverview Orchards	7	67	0.64%
Sandhill Ridge	35	335	3.18%
Paul Wilson Property	135	1,370	13.02%
Gordon Sorenson Property	10	96	0.91%
		TOTAL:	**10,523**

** ADT Based on May 2005 Traffic Impact Study

Based on these values the total contributed trip percentages were calculated for Aspen Springs, existing traffic, and other new developments. These are summarized in Table 2.

Table 2: Total Contributing Trip Percentages

	ADT	% of Total ADT
Total Projected ADT on 8 Mile Ck Road	10,523	
Existing Traffic	2,049	**19%**
Aspen Springs Traffic	5,974	**57%**
New Development Traffic *	2,433	**23%**
New Development Traffic**	67	**1%**

* Traffic Using 8 Mile Creek Road from Eastside Highway to Woodchuck Rd.
** Traffic using a short portion of Eight Mile Creek Road

WGM GROUP, INC.

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(406) 728-4611
FAX: (406) 728-2476
wgmgroup.com

May 18, 2006

Matt Smith
PCI
P.O. Box 1750
Missoula, MT 59806

RE: Aspen Springs - Florence, MT

Dear Matt:

This letter is to address the preliminary review comments in your letter, dated May 11, 2006, in regards to the street, grading, and drainage plans for the Aspen Springs subdivision. Included with this comment response letter are the following items:

- Revised Layout of the Subdivision
- Revised Grading Plan

Below are your original comments and our comment responses:

1. **There has been no change to the Lower Woodchuck design. Initial review comments concerning this road are still applicable.**
   The design of Lower Woodchuck Road is a reconstruction of an existing gravel roadway. This roadway is proposed to be improved with asphalt paving, horizontal realignment with increased centerline radii, superelevation at curves, and vertical realignment. Lower Woodchuck Road will be greatly improved and the design will provide cautionary signing to meet the requirements of AASHTO. Because Lower Woodchuck Road is a reconstruction project of an existing road, existing right-of-way restrictions have been accommodated by the design. In addition, a design exception has been submitted with the subdivision application to address the issues of minimum design speed on Lower Woodchuck Road.

2. **The lots A22-A24 access onto an alley with only 18 feet of asphalt surfacing. This appears not to meet Article 4, Section 5-4-5, paragraph a.**
   Lots A21 through A30 and Lots B54 through B56 have been relocated to the area west of Madison Drive and south of Little Belt Drive; and no longer have their primary access via an alley.

3. **Lionhead Loop Sta 5+50 there is a 50 foot radius curve. This does not meet the Ravalli County Subdivision Regulations for an urban road. This street next to a common area with very little traffic on it, a 50 foot radius curve is not unreasonable as long as it is properly signed.**
   Lionhead Loop has been reconfigured with the lot revisions and no longer has a 50-foot radius curve.

We hope that this addresses all of your comments for the preliminary road plans and that we have provided enough information for preliminary plat review of this development. Please call if you have any questions or require any additional information.

Sincerely,
WGM Group, Inc.

Ryan J Salisbury

Ryan Salisbury, P.E.
Project Engineer

Encl.

Professional Consultants Inc.
Unmatched Experience. Uncompromising Standards.

3115 Russell Street • PO Box 1750 • Missoula, Montana 59806 • 406-728-1880 • fax 406-728-0276

May 11, 2006

Dave Ohnstad
Ravalli County Road and Bridge Department
244 Fairgrounds Road
Hamilton, MT 59840

RE: Aspen Springs

Our office has completed a second preliminary review of the street plans submitted for the Aspen Springs Subdivision on April 24, 2006. Included in the review was a letter from WGM Group and plan and profile drawings. We have reviewed the subdivision in accordance with AASHTO Guidelines for Geometric Design of Highways and Streets and the Ravalli County Subdivision Regulations. The current review consisted of ensuring the comments made during our preliminary review were addressed by WGM. In addition we reviewed the streets and drainage for compliance with Article 4 and Article 8 of the Ravalli County Subdivision Regulations and paragraph 3.2.16 of the Ravalli County Subdivision Regulations.

The designs that have been submitted to PCI from WGM meet the minimum requirements of the Ravalli County Subdivision Regulations and AASHTO design guidelines for urban streets with the following exception.

1. There has been no change to the Lower Woodchuck design. Initial review comments concerning this road are still applicable.

2. The lots A22-A24 access onto an alley with only 18 feet of asphalt surfacing. This appears not to meet Article 4, Section 5-4-5, paragraph a.

3. Lionhead Loop Sta 5+50 there is a 50 foot radius curve. This does not meet the Ravalli County Subdivision Regulations for an urban road. This street next to a common area with very little traffic on it, a 50 foot radius curve is not unreasonable as long as it is properly signed.

The developer has stated the county is required for offsite improvements to the intersection of Eight Mile Creek and Lower Woodchuck Road. The project will be funded through pro-rata share contribution.

The drainage facilities have been reviewed. The developer has provided enough information to ensure that stormwater drainage will be handled in accordance with the Ravalli County Subdivision Regulations. The information provided is adequate to determine that the development will be able to meet minimum requirements for stormwater discharge. Additional detailed information such as size and capacity of

culverts, stormwater retention basins and discharge structures will be reviewed during the final design review for each phase.

Sincerely,
Professional Consultants, Inc

Matthew S. Smith, P.E.

Encl.

WGM GROUP, INC.

ENGINEERING
SURVEYING
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3021 Palmer • P.O. Box 16027 • Missoula, Montana 59808-6027

(406) 728-4611
FAX: (406) 728-2476
wgmgroup.com

April 24, 2006

Matt Smith
PCI
P.O. Box 1750
Missoula, MT 59806

RE: Aspen Springs - Florence, MT

Dear Matt:

This letter is to address the preliminary review comments that you provided our office in regards to the street, grading, and drainage plans for the Aspen Springs Subdivision. Included with this letter are the following items:

- Revised Street Plan and Profile Drawings
- Revised Roadway Design Submittal Sheets
- Revised Aspen Springs Sign Plan
- Intersection Sight Triangle Drawings with Designated Clear Zones

We have reviewed their comment letter dated March 13, 2006 and will address the street issues below.

Horizontal Alignment

1. No new right-of-way has been able to be negotiated with the landowners adjacent to the 15 mph curve on Lower Woodchuck. Due to the right-of-way design constraints, the Lower Woodchuck alignment has not been changed.
2. The design speeds for the roads listed below have been adjusted accordingly on the Schedule for Roadway Design spreadsheet to meet the AASHTO design criteria for centerline radii:

   We have lowered the design speed to 25 mph on the following roads:

   - Spanish Peaks (minimum radius of 200 ft.)
     Note: Spanish Peaks Court has been re-designed and has a minimum centerline radius of 200 ft., and meets a 25 mph design speed.
   - Beaverhead Court (minimum 200 ft. radius, 100 ft. at a stop condition)

- Little Rockies Road (minimum 200 ft. radius, 100 ft. at a stop condition from Station 1+00 to Station 21+29 for a 25 mph design speed and from Station 21+29 to Station 23+06, minimum radius of 125 ft. for a 20 mph design speed)
- Gravelly Road (minimum radius of 200 ft.)
- Mission Lane (minimum radius of 200 ft., 100 ft. at a stop condition)
- Little Belt Drive
- Bear Paw Way
- Tobacco Root Road
- Elkhorn Lane

We have lowered the design speed to 20 mph on the following roads:

- Spanish Peaks Court
- Judith Court
- Lionhead Loop (Station 21+00 to Station 26+50) & (Station 46+50 to Station 48+00)
- Sweet Grass Hills Road
- East Pioneer Road
- West Pioneer Road
- Centennial Drive

We have lowered the design speed to 15 mph on the following roads:

- Lionhead Loop (Station 4+50 to Station 6+00)

Vertical Alignment

Big Belt Drive has been realigned and the vertical curve K-values have been increased to meet a 30 mph design speed for Station 1+00 to Station 13+54 and a 25 mph design speed for Station 12+54 to Station 35+90

We have revised Spanish Peaks Court to better intersect with Big Belt Drive. This will provide for a better vertical profile and eliminate the two vertical curve concerns.

The K-values for Sweet Grass Hills have been revised to meet a 25 mph design speed.

Judith Court has been revised so that the K-values meet a 20 mph design speed. This is a short cul-de-sac, and a higher design speed would not be practical.

East Pioneer, West Pioneer, and Centennial Drive K-values have been revised to better fit with a 20 mph design speed. The last two vertical curves have been combined into one vertical curve as recommended by PCI.

The end of Madison Drive is designed as an emergency access only. The road meets the existing grade of Mountain View Drive at the end of the project parcel boundary.

Intersections

In order to address the sight distance concerns with the intersection of Big Belt Drive, Little Belt Drive, and Bear Paw Way, we have changed the thru road to Big Belt Drive and made both Little Belt Drive and Bear Paw Way stop controlled. We have also included a sight triangle drawing to ensure that sight distances can be met at this intersection. In addition, a sight distance clear zone has been identified on the preliminary plat to ensure that the future lot owner is restricted in landscaping and fencing to maintain the appropriate sight distances on Lot E1. For all lots, a 20 ft. front yard building setback will be a part of the covenants, thus leaving a clear zone for corner lots in other areas of the development.

We have realigned Big Belt Drive and changed the Lower Woodchuck approach location in order to better serve the intersection of Big Belt Drive and Spanish Peaks Court. This new alignment removes the sight distance concerns by eliminating the 260 ft. radius curve at the intersection.

Little Rockies and Garnet Court – We have proposed a warning sign on Little Rockies Road on the approach to this intersection.

Lower Woodchuck and Aspen Springs – We have proposed a warning sign for the stop sign.

Lower Woodchuck and Big Belt Drive – Due to the realignment of this intersection, we feel that stop sign visibility will not be an issue.

Tobacco Root and Highland Way – We have proposed stop warning signs for these two intersections.

Cross-Section Design

The road cross-section design is based on a Resilient Modulus that is determined by a soil geotechnical analysis of the proposed sub-base, base, and surfacing materials. This R-value is dependent on local materials and a soil survey will be performed prior to final design of the roadway. For the purpose of this submittal, an assumed R-value was used based on typical materials found in the area. At final design, a structural number and Reliability Factor will be determined and a pavement design will be calculated in accordance with AASHTO and the MDT Pavement Design Manual.

Offsite Roads

At the intersection of Eight Mile Creek Road and Lower Woodchuck Road some minor improvements have been identified by the Traffic Impact Study. These improvements will be mitigated through our pro rata share contribution to the Ravalli County Road Department. Because we are contributing pro rata share, it would be the Ravalli County Road Department's responsibility to improve this intersection. Please see the attached excerpt (Page 18) of the Traffic Impact Study.

The second offsite intersection is assumed to be Eight Mile Creek Road and the East Side Highway. The Montana Department of Transportation (MDT) is currently studying improvements to the intersection of Eightmile Creek Road and the East Side Highway. MDT has started preliminary planning and design and the improvements are proposed for construction in 2008. The preferred option for this intersection is a modern roundabout and under this scenario, assuming a single lane roundabout, will operate at very good levels of service under the No-Build traffic volumes. When the site-generated traffic is added, good levels of service are generally maintained.

This MDT project will also include a new bridge to replace the existing bridge over the Bitterroot River.

Summary

1. According to the AASHTO minimum horizontal curve radius for a 2% crowned road with a 30 mph design speed is 333 feet. There are several horizontal curves within the subdivision that have less than a 333 feet radius. These streets are not adequate for a 30 MPH design speed. The design speed of the road should be modified or, the radius should be changed. We recommend leaving the design speed of 30 MPH for several of the collector streets, however reducing the design speed for streets that are not collector streets. Using an initial 30 MPH design speed for Aspen Springs and Big Belt Drive of the subdivision and reducing Design Speed further into the subdivision. If this recommendation is followed, only one curve, the horizontal curve at 9+00 of Bear Paw Way would need to be modified to meet the design speed requirements.

We have revised the design speeds for the roads to better match the horizontal and vertical alignments. Big Belt Drive has an initial design speed of 30 mph and is then lowered as it extends into the subdivision. The design speed for Bear Paw Way has been lowered to 25 mph. The horizontal curve at Station 8+46.12 meets a 25 mph design speed.

2. The Spanish Peaks Court and Big Belt Drive intersection is inadequate, the angle of intersection, ignoring the short radius curve, appears to be 63 degrees. In addition this intersects Big Belt Drive on an interior horizontal curve, limiting the

intersection sight distances. Furthermore the vertical curves at the intersection further will make this intersection difficult to negotiate.

We have realigned this intersection and brought Spanish Peaks Court into Big Belt Drive at a perpendicular angle. This new alignment will fulfill the design sight distance requirements.

3. The reliability and design life of the streets need to be evaluated by Ravalli County to ensure they are adequate for the development being considered.

At final design, a structural number and Reliability Factor will be determined and a pavement design will be calculated in accordance with AASHTO and the MDT Pavement Design Manual.

4. No culverts were shown on the roadway plans. The final plans should show the drainage facilities.

We have included culverts and drainage facilities in the revised street plan and profile drawings.

5. The radii of the cul-de-sacs were not shown on the plans. Final plans should show the radii of all cul-de-sacs.

We have included cul-de-sac radii in the revised street plan and profile drawings.

6. The curb returns, handicap ramps and warning signs should be included on the final plans.

We will include the curb returns, handicap ramps and warning signs in final plans for each phase as it is submitted for approval to the county.

If you have any questions or require any additional information, please contact us.

Sincerely,
WGM Group, Inc.

Ryan J Salisbury

Ryan Salisbury, P.E.
Project Engineer

Encl.

Professional Consultants Inc.
Unmatched Experience. Uncompromising Standards.

3115 Russell Street • PO Box 1750 • Missoula, Montana 59806 • 406-728-1880 • fax 406-728-0276

March 13, 2006

Dave Ohnstad
Ravalli County Road and Bridge Department
244 Fairgrounds Road
Hamilton, MT 59840

RE: Aspen Springs

Our office has completed the preliminary review of the street plans submitted for the Aspen Springs Subdivision. This review is step 6 on the RCRBD's Schedule of Activities- Processing and Coordination of the Subdivisions Projects" form. This review is based on the 2004 version of the AASHTO Geometric Design of Highways and Streets and AASHTO Guide for design of Pavement Structures. The developer has provided a full copy of the subdivision submittal, street plan and profile drawings, typical street cross sections, a sign plan and a memo to Dave Ohnstad from the developer's Engineer that explains the criteria used during the design of the streets.

We have broken our review into four parts. First, we evaluated each road in the subdivision based upon its horizontal alignment. The primary evaluation criteria used was the AASHTO minimum curve radius for the design speed of the streets. In addition we evaluated each road for the stopping sight distance available. The following table shows the minimum horizontal curve radius for a street with a 2% crown. (Exhibit 3-16, page 151)

Design Speed (mph)	Radius (ft)
20	107
25	198
30	333
35	510

The second part of the review was for the vertical alignment of the street. Each street was evaluated based on the stopping site distance and the minimum K values (rate of vertical curvature) for sag and crest vertical curves. The following table shows the K values of several design speeds.

Design Speed	Crest K Value	Sag K Value
15	3	10
20	7	17
25	12	26
30	19	37

These K values are required in order to maintain stopping sight distance along the street. In

several instances, the K-values have been reduced at stop controlled intersections. This practice is not specifically condoned in the AASHTO Manual. In order to minimize the amount of stop sight distance the reaction time could be removed from the stopping sight distance equation which would make this practice more reasonable, as long as either the stop sign is visible prior to the curve, or a warning sign is installed.

The third part of the review consisted of reviewing the design of each street intersection. The standards reviewed stopping sight distance, decision sight distance and angle of intersection. Several of the streets in the subdivision have short radius (100 foot) at the intersection. AASHTO states "*The practice of constructing short-radius horizontal curves on side road approaches to achieve right angle intersections should be avoided whenever practical. Such curves result in increased lane encroachments because drivers tend to reduce their path radius using a portion of the opposing lane. Also, the traffic control devices at the intersection may be located outside the driver's line of sight, resulting in the need to install advanced warning signs*" (page 580). The problems associated with these types of intersections are particularly troublesome for trucks. The proposed subdivision has a fairly small number of trucks projected to actually travel into the subdivision. Furthermore, it is anticipated that trucks entering the roadway will be during off peak times of the subdivision. In addition, horizontal curves at intersections will slow vehicles down as they approach the subdivision.

3.2.10

Finally each road cross section was reviewed. The criteria used for evaluating each cross section was adequate travel lane width, adequate parking lane width, adequate shoulder and adequate pavement section.

The design speed used for the roads within the Aspen Springs subdivision were based upon "*Rolling Terrain*" in Table 5-1 of AAHTO Geometric Design of Highway and Streets. For an ADT volume greater than 400, Table 5-1 lists the design speed as 40 MPH. For an ADT of less than 400, Table 5-1 lists the design speed as 30 MPH. The purpose of this road is to provide access to residential lots. The design should reflect a fairly slow speed in the subdivision which allows people to access their lots. In addition, the design speed should allow for the safety of pedestrians throughout the subdivision. Finally, the design of the road should attempt to follow the existing topography in order minimize visual impact of the road on the surrounding land and minimize cuts and fills. AASHTO states "*Urban arterial streets should be designed and control devices regulated, where practical, to permit running speeds of 20 to 45 MPH. Speeds in the lower portion of this range are applicable to local and collector streets in residential areas ...* "(page 71). The plans have attempted to use a design speed of 30 MPH, however many of the horizontal curves do not meet the minimum 30 MPH standard. The 30 MPH design speed is adequate for some of the roads within the subdivision that will collect traffic from adjacent streets, where there will be an excess of 400 ADT. These streets include Aspen Springs BLVD from Lower Woddchuck to Bears Paw Way, Big Belt Drive from Lower Woodchuck to Little Belt Drive, and Little Belt Drive from Big Belt Drive to Madison Drive. The remainder of the roads within the subdivision could be designed for a slower design speed depending on its length and predicted volume.

The following are specific comments of the streets in areas that do not meet the minimum requirements for a 30 MPH street.

Horizontal Alignment

Lower Woodchuck- Is designed as a rural minor collector street. Design speeds for a rural collector with over 400 average daily trips (ADT) this road with over 400 ADT should be 40

MPH (Exhibit 6-1, page 422). This street meets the minimum design criteria for a 40 MPH for over half of its length. With one exception, the remainder of the road meets the design criteria for a 35 MPH street. There is one corner that is adequate for only 15 mph. The developer proposes to improve this corner however is limited by the existing county road easement.

Spanish Peaks Court- 260 foot radius curve - 25MPH.

Beaverhead Court- 200 foot radius curve - 25 MPH. This road is fairly short. A higher speed would be difficult to actually attain, making the lower speed justified.

Little Rockies Road- 200 foot radius curve - 25 MPH

Gravelly Road- 200 foot radius curve - 25 MPH.

Judith Court- 100 foot radius curve- 20 MPH. This a short road a higher speed would be difficult to actually attain, making the lower speed justified.

Mission Lane- 200 foot radius curve - 25 MPH. This a short road a higher speed would be difficult to actually attain, making the lower speed justified.

Little Belt Drive- 200 foot radius curve-25 MPH. The area of the smaller radius is in an area with a fairly high density of intersections and residential lots. An even slower design speed may be justified.

Bears Paw Way- 200 foot radius curve-25 MPH

Lionhead Loop- 50 foot radius curve - 15 MPH, 100 foot radius curve - 20 MPH. The 100 foot radius curves are located in areas with a high density of intersections and residential lots. The slower design speed is justified.

Tobacco Root road-200 foot radius curve- 25 MPH.

Elkhorn Lane- 200 foot radius curve- 25 MPH.

Vertical Alignment

Big Belt Drive (STA 1+57)- K value of 10- 15 MPH. At this location the K-value should be increased on the final plans. The 10% Grade going into the vertical curve will make this difficult to negotiate.

Spanish Peak Court (STA 1+64) K value of 10 - 15 MPH. (STA 2+21) K value of 7 - 20 MPH. These two vertical curves are almost connected. Both values are less than the design speed. Recommend on the final plans this portion of the road be redesigned to make a smoother transition into the intersection.

Sweat Grass Hills Road- STA (2+66.5) K value of 15- 20 MPH.

Judith Court- STA (2+14) K value of 7- 20 MPH.

East Pioneer Road (Sta 1+64) K value of 3 - 15 MPH, (STA 7+31) K value 7 - 20 MPH, STA (7+75) K value of 10-15 MPH. This combination of K values should be modified to better fit

the design speed of the road. The last two curves could be combined into one curve to better facilitate entering the intersection.

Madison Drive- (STA 20+00) No vertical curve designed as it moves off of the subdivision. It appears there is close to a 7% grade difference in the roads. This should be mitigated through a vertical curve or warning signs or both.

Intersections

Bears Paw Way and Beartooth Court- Intersection sight distance adequate due to a 20MPH curve. If changes to the curve are made, changes to this intersection are also required.

Big Belt Drive and Bears Paw Way (West Intersection)- Sight distance left 120 feet, 261 feet required. Sight distance right 230 feet, 368 feet required. Angle of intersection without short radius curve is 51 degrees. Recommend the final plans reconfigure this intersection.

Big Belt Drive and Bears Paw Way (East Intersection)- Sight distance left less than required. As allowed by AASHTO, the Bear Paw way meets minimum stopping site distances for this intersection.

Big Belt Drive and Spanish Peaks Court- Left sight distance and Right sight distance at intersection inadequate. This final plans should show some mitigation for this intersection in order to meet AASHTO Requirements.

Lionhead and Snowcrest- Sight distance is adequate because of 20 MPH curve. If changes to the curve are made, changes to this intersection should also be made.

Lionhead and Cabinet Court- This intersection is adequate with Lionhead as a 20 MPH street in this area. Lionhead corners are designed for a 20 MPH road.

Little Rockies and Garnett Court- Sight distance is just too short. A warning sign along Little Rockies Road may be warranted.

Lower Woodchuck and Aspen Springs- Stop sign visibility may be an issue. A warning sign may be warranted.

Lower Woodchuck and Big Belt Drive- Stop sign visibility may be an issue. A warning sign may be warranted.

Tobacco Root and Highland (Both Ends)- Stop sign visibility may be an issue. A warning sign may be warranted.

Cross Section Design

The Lower Woodchuck asphalt section uses a Reliability Factor to determine the structural number. AASHTO suggests a reliability factor of 75% to 95%. (AASHTO Guide for Design of Pavement Structures, Table 2.2, page II-9)

In design of the pavement section, a 10 year design life is used. AASHTO shows that a low volume paved highway should have a minimum performance period of 15 years and a maximum performance period of 25 years. (AASHTO Guide for Design of Pavement Structures,

page II-7)

Offsite roads

The two offsite intersections are identified in the subdivision packet as requiring improvements in order to meet anticipated daily traffic, however who is responsible for the improvements and when these improvements are going to be made is not defined. Montana Department of Transportation has some interest in improving and extending Lower Woodchuck road however the time frame is not defined.

Summary

1. According to the AASHTO minimum horizontal curve radius for a 2% crowned road with a 30 mph design speed is 333 feet. There are several horizontal curves within the subdivision that have less than a 333 feet radius. These streets are not adequate for a 30 MPH design speed. The design speed of the road should be modified or, the radius should be changed. We recommend leaving the design speed of 30 MPH for several of the collector streets, however reducing the design speed for streets that are not collector streets. Using an initial 30 MPH design speed for Aspen Springs and Big Belt Drive of the subdivision and reducing Design Speed further into the subdivision. If this recommendation is followed, only one curve, the horizontal curve at 9+00 of Bears Paw Way would need to be modified to meet the design speed requirements.

2. The Spanish Peaks Court and Big Belt Drive intersection is inadequate, the angle of intersection, ignoring the short radius curve, appears to be 63 degrees. In addition this intersects Big Belt drive on an interior horizontal curve, limiting the intersection sight distances. Furthermore the vertical curves at the intersection further will make this intersection difficult to negotiate.

3. The reliability and design life of the streets need to be evaluated by Ravalli County to ensure they are adequate for the development being considered.

4. No culverts were shown on the roadway plans. The final plans should show the drainage facilities.

4. The radii of the cul-d-sacs were not shown on the plans. Final plans should show the radii of all cul-d-sacs.

5. The curb returns, handicap ramps and warning signs should be included on the final plans.

Please direct any questions to me at the above number.

Professional Consultants, Inc
Matthew S. Smith, P.E.

EXHIBIT A-4

Ben Howell

From: David Ohnstad
Sent: Wednesday, June 21, 2006 10:41 AM
To: Ben Howell
Cc: Renee Van Hoven
Subject: aspen springs variance request

Ben -

In our approval of the Preliminary Design for the Aspen Springs Subdivision project (31 May 2006) the Road & Bridge Department also offered recommendation on the eight variance requests made by the project owner. Here follows is a more detailed summary of our opinion. Please note that the Design Exception requested for horizontal curvature on Lower Woodchuck Road will be processed, upon receipt of a completed Schedule for Design Exception, through the Design Exception Practices policy adopted by the Board of County Commissioners last August.

With reference to Variance Request # 7 (Lower Woodchuck Road) requesting relief from making the necessary roadway improvements, and with reference to the criteria employed in review of subdivision variance requests -

1) The granting of this variance **may prove detrimental** to the public health, safety or general welfare or injurious to other adjoining properties. Lower Woodchuck Road is functionally classified as a Major Local Access - Agricultural Access roadway currently serving as the only access for ranches and other property in the Lower Woodchuck corridor. The current average Pavement Condition Index for the paved segment of Lower Woodchuck Road is six (on a ten scale). The current "design" and condition of the roadway may be nominally acceptable for current traffic volumes, but would not be appropriate for the potentially large volume of traffic generated by the Aspen Springs project. Significant increases in volume on this roadway, without improvement, may create un-safe conditions for current users as well as new residents.

2) The conditions on which the request for variance is based **are not unique to this property**.

3) There are **no physical conditions which would prevent compliance** with the subdivision regulations.

4) -

5) The variance will cause a substantial increase in public costs. The roadway will need to be improved in order to support the additional demand placed upon it by the proposed subdivision. Absent the project owner making those improvements, upon the arrival of subdivision residents, and given that the roadway is a county-operated facility, the public would be faced with the potential of increasing the level of service on the roadway to satisfy that added demand.

DAVID H. OHNSTAD
COUNTY ROAD SUPERVISOR
RAVALLI COUNTY, MONTANA
(406) 363 - 2733

EXHIBIT A-5

From: David Ohnstad
Sent: Friday, June 23, 2006 4:01 PM
To: Karen Hughes
Cc: Renee Van Hoven; Ben Howell
Subject: RE: aspen springs variance request

Assisted by some clever cutting and pasting, my response to Variance #8 follows. With regard to the "emergency access" issue, given the size and location of the Aspen Springs project, I would agree that a secondary access would be beneficial if not critical. I do not have the records in front of me, but I believe that Mountain View Drive may not have a sixty-foot easement, which may be part of the issue with not wanting to pursue that route. I will respond further next week.

As far as Ben's cheap comments about hockey in Minnesota go - - all the teeth-optional Canadians playing for the "Canes" must fit in pretty well down thar in Caroliner with Goober, Gomer and Floyd the Barber (!!!).

With reference to Variance Request # 8 (N/S segment of Eight Mile Creek Road) requesting relief from making the necessary roadway improvements, and with reference to the criteria employed in review of subdivision variance requests -

1) The granting of this variance **may prove detrimental** to the public health, safety or general welfare or injurious to other adjoining properties. The N/S segment of Eight Mile Creek Road is functionally classified as a Major Collector roadway with a current ADT of 2113 and currently serves as the only access for ranches and other property in the Lower Woodchuck corridor. The current average Pavement Condition Index for this segment of Eight Mile Creek Road is six (on a ten scale). The current "design" and condition of the roadway are not sufficient for the current level of traffic. If the traffic levels were (more than doubled) as a result of this project, without improvements to the roadway, current users as well as new residents may be subject to compromised safety. Also, the current design of the intersection of Eight Mile Creek Road and Lower Woodchuck Road would not safely accommodate the significantly increased traffic volumes arising from this project.

2) The conditions on which the request for variance is based **are not unique to this property.**

3) There are **no physical conditions which would prevent compliance** with the subdivision regulations.

4) -

5) **The variance will cause a substantial increase in public costs.** The roadway will need to be improved in order to support the additional demand placed upon it by the proposed subdivision. Absent the project owner making those improvements, upon the arrival of subdivision residents, and given that the roadway is a county-operated facility, the public would be faced with the potential of increasing the level of service on the roadway to satisfy that added demand.

DAVID H. OHNSTAD
COUNTY ROAD SUPERVISOR

6/26/2006

EXHIBIT A-6

Renee Van Hoven

From: David Ohnstad
Sent: Tuesday, June 27, 2006 5:07 PM
To: Renee Van Hoven
Subject: RE: aspen springs variance request

Yes, in my opinion that would be a reasonable condition of approval; again, given the size and scope of the project.

From: Renee Van Hoven
Sent: Tuesday, June 27, 2006 4:02 PM
To: David Ohnstad
Subject: RE: aspen springs variance request

The applicant is proposing an emergency access off Mountain View Drive, which currently does not meet County Standards. Should Mountain View Drive, the proposed emergency access, be improved to meet County Standards?

Renee Van Hoven
Ravalli County Planning Department
215 S. 4th St., Suite F
Hamilton, MT 59840
(406)375-6530
rvanhoven@ravallicounty.mt.gov

From: David Ohnstad
Sent: Tuesday, June 27, 2006 3:16 PM
To: Renee Van Hoven
Subject: RE: aspen springs variance request

Yes. I believe that encouraging the use of a route that has been designed as the "primary" access, in this case Lower Woodchuck Road, may result in a more orderly flow of traffic on roadways designed to accommodate that traffic; however, I believe it is important to have a "secondary" access, at least for emergency situations, that has been designed, would function, and could fully accommodate emergency response vehicles and/or provide for evacuation - full design width and structure, clear zones and no (locked) gates or other fixed obstacles - even if it's regular, routine use is limited.

From: Renee Van Hoven
Sent: Tuesday, June 27, 2006 3:08 PM
To: David Ohnstad
Subject: RE: aspen springs variance request

Hi Dave,

I have a quick question about this sentence:

"We would have concern about approving a subdivision the size and scope of Aspen Springs without a reasonably developed secondary access, even one that may be limited to use as an "emergency route"."

Are you saying that you think an emergency access as a secondary access would be okay?

Thanks!

Renee Van Hoven
Ravalli County Planning Department
215 S. 4th St., Suite F
Hamilton, MT 59840
(406)375-6530
rvanhoven@ravallicounty.mt.gov

From: David Ohnstad
Sent: Monday, June 26, 2006 9:39 AM
To: Ben Howell
Cc: Karen Hughes; Renee Van Hoven; George Corn
Subject: FW: aspen springs variance request

Ben -

My response to the variance request for a second access to Aspen Springs would be similar to the others noted below -

1) The granting of this variance **may prove detrimental** to the public health, safety or general welfare or injurious to other adjoining properties. The primary access to Aspen Springs, Lower Woodchuck Road, is currently a "no outlet" roadway. We would have concern about approving a subdivision the size and scope of Aspen Springs without a reasonably developed secondary access, even one that may be limited to use as an "emergency route". Without such a secondary access for emergency response services, we believe public safety would indeed be compromised.

2) The conditions on which the request for variance is based **are not unique to this property.**

3) There are **no physical conditions which would prevent compliance** with the subdivision regulations.

4) -

5) **The variance may cause a substantial increase in public costs.** If Lower Woodchuck Road is the only access to this subdivision and an event (natural or manufactured) renders the roadway impassable, the cost of providing emergency response services (fire, medical, evacuation) to this area could be considerable, if not extreme.

Your office should also now have copy of correspondence that MDOT sent to George regarding the potential impacts of this project to State Route 203. As noted earlier, the construction of a modern roundabout at the SR203 & Eight Mile Creek Road intersection should make that location much more safe and functional than it is now, and should, with the modification noted in the MDOT letter, accommodate the traffic generated from Aspen Springs. With that situation aside; however, the intersection of SR203 and U.S. Highway 93 in Florence is much more problematic, particularly when one considers that another 600+/- unit subdivision is being proposed in the Dry Gulch area with much of that traffic also being channeled north on SR203 to Florence. The intersection in Florence is already compromised; adding another 9,000 to 10,000 trips per day would very likely result in a failed level of service, or "gridlock". I do not know that these subdivisions alone should be asked to remedy this - as noted, the intersection is already compromised both in design and function; however, any project adding so significantly to a problematic situation should reasonably be expected to participate in the remedy.

DAVID H. OHNSTAD
COUNTY ROAD SUPERVISOR
RAVALLI COUNTY, MONTANA
(406) 363 - 2733

EXHIBIT A-7

IC-06-06-1022
Ravalli County Planning Dept.

RAVALLI COUNTY ROAD & BRIDGE DEPARTMENT

244 FAIRGROUNDS ROAD
HAMILTON, MONTANA 59840
(406) 363 - 2733

MEMORANDUM

DATE 29 JUNE 2006

TO RAVALLI COUNTY PLANNING DEPARTMENT

FROM DAVID H. OHNSTAD, COUNTY ROAD SUPERVISOR

SUBJECT ASPEN SPRINGS - DESIGN EXCEPTION - **DESIGN SPEED**

Attached please find copy of analysis from the county's consulting engineers relative to a request for exception from the county's adopted roadway design standards; a reduction in the design speed limit, from 40 to 35 and 20 miles-per-hour; for two horizontal curves on Lower Woodchuck Road, a county-operated roadway with a functional classification of Major Local Access - Agricultural Access. Please note that the following recommendation is limited to the referenced request for design exception. The Road & Bridge Department previously provided analysis and recommendation on requested variances to the Subdivision Regulations. We offer this opinion based upon the Design Exception Practices policy as adopted by the Board of County Commissioners.

The Road & Bridge Department finds that this request for exception to design standards conforms to the Design Exception Practices policy, that the proposal appropriately justifies the request and reasonably mitigates potential impacts.

We approve this design exception with the understanding and expectation that the mitigating efforts as recommended in the consulting engineer's analysis are incorporated in the final design and submitted for approval by the department.

David Ohnstad

From: Tom H [tomh@pcimontana.com]
Sent: Wednesday, June 28, 2006 3:17 PM
To: David Ohnstad
Cc: Matt S; Ryan Salisbury
Subject: Aspen Springs Design Exception

We have reviewed the revised Variance and Design Exception for Lower Woodchuck Road as submitted by WGM Group for the Aspen Springs Project.

The Design Exception process is allowed and defined under AASHTO and the Ravalli County adopted policy on Design Exception Practices. We are in substantial agreement with the proposed design exception to the design speed on Lower Woodchuck Road, specifically in regards to a 20 mph and a 35 mph curve, however, we recommend the Design Engineer provide a review of the warrants for guardrail and signage per MUTCD at the 20 mph and 35 mph curve. If warranted, guardrail should be included in the improvements to the curve. Also a Level of Service (LOS) analysis for the capacity of Lower Woodchuck, given the 20 mph curve, should be conducted. A minimum LOS D should be maintained at the end of a 20 year design.

Please call if you have any questions.

Thomas M. Hanson, P.E.,L.S.
Professional Consultants, Inc.
1713 North 1st Hamilton, MT. 59840
406.363.1201
406.363.1215 fax

EXHIBIT A-8

Renee Van Hoven

From: Ryan Salisbury [RSalisbury@wgmgroup.com]
Sent: Monday, June 26, 2006 11:15 AM
To: Ben Howell; Renee Van Hoven
Cc: perry ashby
Subject: FW: Aspen Springs

From: dan martin [mailto:dmartin@centric.net]
Sent: Monday, June 26, 2006 8:06 AM
To: Ryan Salisbury
Subject: Aspen Springs

Ryan,

sorry I havent got back to you I have been out of state working and just got back last night. We are definatly still interested in the piece of ground for a possible new station. As discussed before you would be putting in fire hydrants after the first fifty houses. I had one question on this How long will it take for the first fifty houses? Also I will get a letter sent to you tonite or in the morning for your records.

Dan Martin
Chief Florence Fire

EXHIBIT A-9

FLORENCE RURAL FIRE DISTRICT
IMPACT FEES

The Florence Rural Fire District has established the following requirements for new purposed subdivisions within it's district. The requirements were established with consideration for life safety of the residence of the district as well as the Volunteers who are called upon to protect the district and to mitigate harm to the public health and environment.

When establishing the requirements, emphasis was given to the Uniform Fire Code NFPA1, Articles 9 and 10, and Appendix III-A, The Ravalli County Subdivision Regulations, The Ravalli County Road Department standards and the 1993 Fire Protection Guidelines for Wildland Residential Interface Development. These Publications and Articles establish rules for dealing with fire apparatus access roads, fire department access to buildings, water supplies for fire protection, installation and maintenance of fire-protection systems and clearance of brush and vegetative growth from roadways.

Consideration was also given to Section 23.7.105 Administrative Rules of Montana, which is adopted pursuant to authority of 50-3-102 (2) and 50-3-103, MCA, which incorporates by reference the UFC (Uniform Fire Code) and establishes a minimum fire prevention code for Montana.

Every effort has been made to use words and phrases consistent with the definitions given them in the above mentioned publications.

Development Name: A.P. Lot 1, Blk 9, Sunnyside Orchards #3 (3rd Submittal)
Number of Lots: 3
Developer(s) Name: ?

The Fire Department requires that all roads and bridges meet or exceed and are maintained to, the requirements of the Uniform Fire Code (UFC) section 902, which reads in part:

902.2.1 Required Access. Fire apparatus shall be provided in accordance with Sections 901 and 902.2 for every facility, building or portion of a building hereafter constructed or moved into or within the jurisdiction when any portion of the facility or any portion of an exterior wall of the first story of the building is located more than 150 feet (45720 mm) from fire apparatus access as measured by an approved route around the exterior of the building or facility...

The Florence Rural Fire District currently has an ISO Class 7 Residential rating which requires a water flow of 200 gallons per minute for a duration of 20 minutes or a total flow of 4000 gallons per residence.

Considering the above information the Fire District will accept a water supply of 1000 gallons per minute or 2500 gallons per lot of stored water. The water supply installation, upkeep and maintenance will be the responsibility of the Subdivision.

The Fire District realizes the financial burden of installing and maintaining a water supply and or storage tanks capable of providing the required water flows and is willing to accept a payment of $500.00 (Five Hundred Dollars and no/100) per lot, in lieu of the water supply required by the UFC. The Fire District is willing to accept half of the payment upon approval of the Subdivision and the remaining half upon closing of each lot. The Fire District will then upon its elective purchase fire fighting apparatus or develop water supplies.

EXCEPTIONS: 1. When building are completely protected with an approved automatic sprinkler system, the above listed water supply and payment schedule may be reduced by 50%. The Subdivision Covenants must state that "All residences constructed within the subdivision be completely protected with an approved automatic sprinkler system." Payment for the reduced amount of $250.00 per lot will be accepted at the time the Subdivision is approved. If at any time any residence is built without an approved sprinkler system within the subdivision, all lots will be subject to an additional $250.00 dollar payment, regardless weather they have sprinklered residences located on them or not.

Gary L Zabel 3-15-04

Chairperson Date

EXHIBIT A-10

DEPARTMENT OF NATURAL RESOURCES AND CONSERVATION
MISSOULA WATER RESOURCES REGIONAL OFFICE

BRIAN SCHWEITZER
GOVERNOR

1610 S. 3RD STREET W., SUITE 103
P.O. BOX 5004

STATE OF MONTANA

(406) 721-4284
FAX (406) 542-1496

MISSOULA, MONTANA 59806-5004

June 30, 2005

RECEIVED
JUL 05 2005
Ravalli County Planning Dept.
IC 05 07 1282

Ryan Salisbury, PE
WGM Group
PO Box 16027
Missoula, MT 59808-6027

RE: Proposed Aspen Springs Subdivision

Dear Mr. Salisbury:

I have reviewed the information you provided on the proposed Aspen Springs Subdivision to be located three miles east of Florence.

My comments are limited to the water right requirements for the water supply for the subdivision. The narrative states that a public water system supplied by new local wells is proposed. A Beneficial Water Use Permit is required before water can be put to beneficial use.

I am enclosing a copy of the application for a Benecial Water Use Permit and the administrative rules that list the application requirements, which include extensive aquifer testing. Processing the application will likely take six to nine months, once the application is correct and complete and if no objections are received.

If you have any questions, please contact me.

Sincerely,

Bill Schultz
Regional Manager

Cc: Karen Hughes.

EXHIBIT A-11

DEPARTMENT OF NAT[illegible]
RESOURCES AND CONSERV[illegible]
MISSOULA WATER RESOURCES REGIONAL OFFICE

11-06-05-B1
Ravalli County Planning Dept.

BRIAN SCHWEITZER
GOVERNOR

1610 S. 3RD STREET W., SUITE 103
P.O. BOX 5004

STATE OF MONTANA

(406) 721-4284
FAX (406) 542-1496

MISSOULA, MONTANA 59806-5004

May 25, 2006

Ryan Salisbury, PE
WGM Group
PO Box 16027
Missoula, MT 59808-6027

RE: Proposed Aspen Springs Subdivision – Response to May 19, 2006 Letter

Dear Mr. Salisbury:

My comments are limited to the water right requirements for the water supply for the subdivision. I understand that a community water system supplied by new local wells is proposed. A Beneficial Water Use Permit is required before water can be put to beneficial use.

I have been provided a copy of a report dated January 20, 2006 by Howard Newman, hydrogeologist. The report raises issues associated with groundwater availability for the proposed subdivision. The report has been reviewed by a DNRC hydrogeolgist. He agrees that water availability may be an issue.

To this date, DNRC has not received a water right application for this subdivision. Processing of the application will take at least six months. Issuance of a provisional water use permit is contingent on the application meeting the required criteria. The application will be sent out for public notice. If objections are received and a hearing required, it may be two years before a provisional water use permit could be issued.

If you have any questions, please contact me.

Sincerely,

Bill Schultz
Regional Manager

Cc: Karen Hughes

EXHIBIT A-12

HOWARD NEWMAN

Hydrogeologist

1200 Tulip Lane • Missoula, MT 59802 • Bus. (406) 549-2525

January 20, 2006

Steve Hall and Allan D. Slagell, Co-Chairmen
Florence Coalition Against Aspen Springs
P.O. Box 313
Florence, MT. 59833

re: Groundwater Availability and Aquifer Testing of Aspen Springs Wells

Dear Sirs:

The coalition of homeowners which you represent have asked me to address the potential impacts from the proposed 636 residential and 7 commercial lot Aspen Springs Subdivision which will be located on the ridge to the north of Eight Mile Creek and Riverview Orchards subdivision.

The purpose of this letter is twofold. The first is to bring to light the fact that the specific area between Eight Mile Creek and Woodchuck Creek where Aspen Spring is proposed to be built (Appendix A) is the second driest site with respect to water yield in the entire Bitterroot Valley. The second is to recommend that both the Department of Environmental Quality (DEQ) and the Department of Natural Resources and Conservation (DNRC) Water Rights Office take a very close look at any Aspen Springs groundwater submittal because the proposed water use demands for the subdivision may be beyond the confined and unconfined aquifers ability to sustain continuous withdrawals without adversely affecting both their own wells and individual wells of some area residents in either Eight Mile Creek to the south or Woodchuck Creek to the north. Although it is not my intent to provide an assessment of the groundwater in the area being developed, I do intend to point out several shortcomings with the original document that was initially submitted.

Groundwater Availability. Farnes and Shafer (1972) noted that the Davis Creek and Woodchuck Creek watersheds to the northwest of Eight Mile Creek had the second lowest average annual precipitation (Willoughby-Spooner Creek watershed was the lowest) and generated the second least amount of water (Average Annual Yield) of all Bitterroot watersheds (Appendix B). The Eight Mile Creek watershed was the third lowest yielding watershed of the 48 watersheds evaluated. Farnes and Shafer (1972) estimated the Average Annual Yield of the Eight Mile Creek and Davis-Woodchuck drainages to be 6,700 and 5,500 ac-ft (Appendix B). WGM Group's Project Summary stated that the current total groundwater rights appropriations within Eightmile Valley to be 1,335 ac-ft/year and said that this was 17.8% of the "total yearly groundwater flux". This means that WGM Group estimated the average annual yield to be about 7,500 ac ft/year. The truth of the matter is that the Project Summary made a number of assumptions or inferences that are incorrect. They were as follows:

1. To begin with, a sub-heading within the Project Summary was titled "Aquifer Properties". However, the aquifers that were tested were not identified or discussed nor were any aquifer properties mentioned. Base on the well logs that were made available, two aquifers were encountered. One was unconfined (Appendix C) and the other confined (Appendix D). Both aquifers appear to be equally productive as each was tested at 75+ gpm. However, each well/aquifer are expected to respond differently to long term pumping. Because the aquifers are not areally extensive and appears to be a truncated alluvial fan deposit, flow to the well(s) will not be radial when pumped for an extended period of time. This will alter any late-time drawdown response which will complicate any attempt at modelling.

2. The Aspen Spring wells will not receive recharge from the Eight Mile Creek drainage as stated. The source area for recharge is the ridge between Eight Mile Creek and Woodchuck Creek. This means that the stated recharge was overstated.

3. WGM Group's Project Summary also stated that "there was more than adequate water available to service the Aspen Springs subdivision from the Eightmile Aquifer". However, there was no mention as to how much water would be needed to meet either domestic or summer irrigation demands. According to Farnes and Shafer (1972), WGM Group over estimated the average annual yield of Eight Mile Creek. WGM's estimate would be acceptable had they referenced their source or stated how their value was calculated. Regardless, groundwater flux moving through the Eight Mile Creek drainage will not be the source of the Aspen Springs wells. So their estimate as to groundwater availability is a moot point.

4. WGM Group also suggested that current groundwater rights appropriations were representative of water use in the Eight Mile Creek drainage. This is also a misrepresentation of the facts. (Note: When addressing availability for a water right permit application, one is only required to address permitted groundwater withdrawals. However, the total of all withdrawals should be taken into account when addressing groundwater impacts because it should be incumbent on the applicant to address all use. Also, all well users have a right to object to a proposed permit application regardless of whether they have a valid water right or not.) The Montana Bureau of Mines and Geology (MBMG) report that eight (8) wells are in Section 5 and 38 wells are in Section 6. Of these wells, 3 water rights for said groundwater withdrawals are claimed in Section 5 and 12 are claimed in Section 6. Nine of the wells in Section 6 were test wells which were drilled for Hendrickson or Aspen Springs (Appendix I). Therefore only 44% of the wells that are recorded with the MBMG have water rights. This would increase the estimate of the percentage of groundwater being withdrawn to about 36% to 40% of the groundwater available.

To make matters worse, a good number of the wells in Eight Mile Creek are not on file with the MBMG in Butte. Therefore, it is likely that 2 to 3 times as much water is being withdrawn from the Eight Mile Creek aquifer(s) than there are water rights for. This means that WGM Groups 17.8% estimate of use versus flux (availability) is more likely 50% to 60% if not more. Again, this is a moot point in that the Aspen Springs wells will be appropriating groundwater from the aquifer beneath the ridge between Eight Mile and Woodchuck Creeks.

5. In summary, it has been suggested by the applicants representative that there is an abundance of groundwater available for the Aspen Springs development. However, the groundwater availability estimate that was used was not representative of the area that would actually be providing water to the wells. Before any approval is granted by any agency, an estimate of actual groundwater availability should be quantified and potential impacts be identified.

The relatively small recharge area of low precipitation just north of Eight Mile Creek is the area that will be called upon to provide water for the Aspen Springs wells. The problem with the WGM's initial 17 page Project Summary was that it was inferred that the Aspen Springs wells would be taking water from the Eight Mile Creek Watershed. This is not true. All Eight Mile water passes to the south of the proposed subdivision and will not be available to the Aspen Springs wells. In fact, groundwater from the area where the Aspen Springs subdivision is located flows southwesterly and contributes groundwater to wells on the north side of the Eight Mile Creek drainage (Appendix E). As far as streamflow is concerned, the 25-Year peak flow for Eight Mile Creek was the lowest of all Bitterroot tributaries (Appendix F).

Two different authors that prepared groundwater maps for the area of concern. Groundwater maps by Stewart (1998)(Appendix G & H) and Briar and Dutton (2000)(Appendix E) clearly show that the direction of groundwater flow in the vicinity of Aspen Springs is southwesterly and moves from the ridge north of Eight Mile Creek into the Eight Mile Creek valley. This means that the groundwater source area for the Aspen Springs wells is not Eight Mile Creek. Therefore, groundwater generated in the Eight Mile watershed is not available to wells drilled on the ridge to the north of Eight Mile Creek as has been suggested. This also suggests that residents in the vicinity of Riverview Orchards subdivision could be affected by long term pumping withdrawals from the Aspen Springs wells if said wells are approved. This is demonstrated by the lines of flow shown on the January 1995 and May 1996 groundwater maps (Stewart, 1998) that show groundwater flowing from the proposed well sites into the Eight Mile Creek.

Because it appears that both confined and unconfined aquifers will be used to provide water for the subdivisions wells are truncated, long term effects are not known and most likely can't be modeled for any extended period of withdrawal based on a relatively short one (1) to three (3) day test. Therefore, the best way to estimate long term pumping effects would be to pump said

well or wells for an extended period of time, that is 5 to 7 days. If more than one well are known to penetrate the same aquifer, it is also suggested that said wells be pumped simultaneously at or above the design pumping rate.

Domestic Demands. At full occupancy, domestic withdrawals for 640 lots based on 300 gallons per home per day (gph/d) amounts to 192,000 gallons per day (gpd). To provide this amount of water, the wells will have to be able to sustain a continuous pumping rate of 133.3 gpm year-round. If the wells are only pumped half time as is usually recommended, ie 12 hours on and 12 hours off, the wells will have to sustain a pumping rate of 266.7 gpm. In as much as the best test wells that were drilled in the area were rated at 75 gpm for 8 hours, this means that the two best wells will have to pump continually year round to provide the necessary water for this proposed subdivision.

Irrigation Demands. Irrigation withdrawals have not been stated. Consequently irrigation demands could double pumping withdrawals. This will further stress the aquifer and wells.

Recommendations. Given that this is the second driest area in the Bitterroot Valley, and because wells and groundwater withdrawals will not be from a more extensive alluvial aquifer such as Eight Mile Creek which receives recharge from a large basin, the wells and groundwater sources should be thoroughly tested and proven before final plat approval is granted. However, testing should not be limited to a single 72 hour test of one well. All wells should be thoroughly tested and well/aquifer interaction should be documented. All pumping withdrawals should be conveyed well off-site to preclude the possibility of artificial recharge. Because it is not likely that standard groundwater modelling can not be used to predict long-term effects of pumping withdrawals, extended testing appears to be warranted. Furthermore, because one or more production wells may penetrate both unconfined and confined aquifers, the wells should be constructed so as to prevent groundwater from moving from one aquifer to another. Not only is this not allowed under Montana Code, it could cause the demise of one or both aquifers; the upper aquifer by de-watering and the lower aquifer by bacterial or chemical contamination.

If groundwater proves to be as available as it has been suggested, then the DNRC Permit Application will be approved and the project can proceed without neighboring residents living in constant fear of loosing their water.

Respectfully,

Howard Newman
Hydrogeologist

Attachments (Appendix A through I)

Referenced Cited

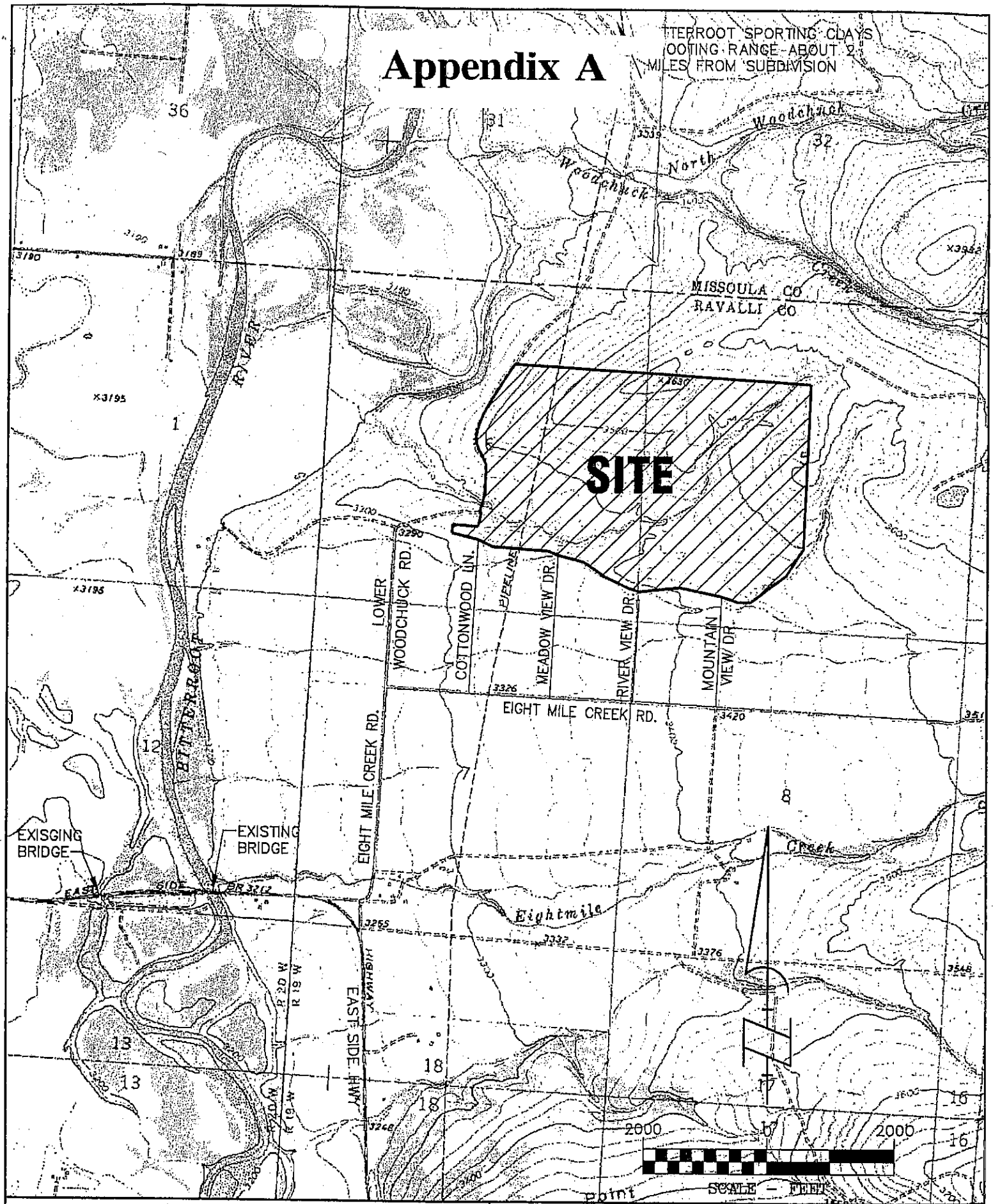
Briar, D.W. and DeAnn Dutton. 2000. Hydrogeology and Aquifer Sensitivity of the Bitterroot Valley, Ravalli County, Montana. U.S. Geological Survey Water Resource Investigations Report 99-4219.

Farnes, P.E. and B.A. Shafer. 1972. Hydrology of Bitterroot River Drainage. USDA, Soil Conservation Service, Bozeman, MT., 30 pp.

WGM Group. 2005. Project Summary, Aspen Springs.

Stewart, Anne Marie. 1990. Groundwater Quantity and Quality of the Eight Mile, Ravalli County, Montana. Unpub. M.S. Thesis, University of Montana, Missoula, 262 p.

Appendix A



VICINITY MAP EXHIBIT
ASPEN SPRINGS
LOCATED IN SECTION 6 AND THE W 1/2 OF SECTION 5,
T. 10 N., R. 19 W., P.M., M.
MISSOULA, MONTANA

WGM GROUP, INC.
ENGINEERING • SURVEYING • PLANNING
3021 Palmer • (406) 728-4611
P.O. Box 16027 • Missoula, MT 59808

PROJ: 04-06-28
DWG: 040628pkt-usgs.dwg
TAB: LAYOUT1
DRAFT: CEG
DATE: 05/26/05
SHEET 1 OF 1

Appendix B

TABLE I.
WATER YIELD FOR THE BITTERROOT RIVER AND TRIBUTARIES
Based on 1953-67 Period

Water-shed	Sub-Basin	Name	Approx. Drainage Area Sq.Mi.	Average Annual Pcp. Inches	Average Annual Yield 1000's Ac.Ft.
2a3-1	1	Upper West Fork	111	33	68.0
	2	Hughes Creek	62	33	38.0
	3	Overwhich Creek	95	31	50.6
	4	Blue Joint Creek	73	34	46.6
2a3-2	5	Piquett Creek	49	28	22.0
	6	Nez Perce Fork	99	43	92.3
	7	Boulder Creek	32	67	51.2
	8	Trapper Creek	37	62	54.2
	17	Chaffin Creek	27	47	27.4
	19	Tin Cup Creek	57	56	75.9
	20	Rock Creek	68	68	109.0
2a3-3	9	Upper East Fork	56	38	43.3
	10	Moose Creek	61	35	40.5
	11	Meadow Creek	38	32	22.3
	12	Cameron Creek	78	22	22.8
	13	Tolan Creek	43	28	19.5
	14	Camp Creek	36	27	15.3
	15	Warm Springs Creek	93	28	42.0
2a3-4	16	Rye Creek	68	23	21.7
	18	Burke-Harlan	39	18	5.2
	23	Sleeping Child Creek	93	27	42.1
	24	Skalkaho Creek	121	32	71.0
	25	Gird Creek	48	19	9.0
2a3-5	21	Lost Horse Creek	75	68	126.0
	22	Roaring Lion Creek	54	54	67.6
	26	Sawtooth Creek	44	59	61.9
2a3-6	28	Blodgett Creek	36	62	54.1
	29	Mill Creek	46	61	66.9
	31	Fred Burr Creek	26	56	34.0

(Continued)

Appendix B

TABLE I. (Continued)
WATER YIELD FOR THE BITTERROOT RIVER AND TRIBUTARIES
Based on 1953-67 Period

Water-shed	Sub-Basin	Name	Approx. Drainage Area Sq.Mi.	Average Annual Pcp. Inches	Average Annual Yield 1000's Ac.Ft.
2a3-6A	32	Bear Creek	42	54	53.1
2a3-6B	33	Sweathouse Creek	32	46	31.7
	34	Big Creek	64	55	82.6
2a3-7	27	Willow Creek	63	21	15.1
	30	Willoughby-Spooner	95	15	5.1
2a3-7A	35	Burnt Fork Creek	101	27	43.6
2a3-8	36	Kootenai Creek	42	59	58.9
	37	Ambrose-Three Mile	86	17	10.0
	38	Bass Creek	24	58	33.3
	39	Sweeney Creek	47	58	65.0
	40	Eight Mile	36	19	6.7
2a3-9	41	Carlton Creek	15	45	14.4
	42	Davis-Woodchuck	37	18	5.5
	47	Miller Creek	59	18	7.8
2a3-10	43	Upper Lolo Creek	74	48	71.0
	44	Middle Lolo Creek	86	34	45.7
	45	South Fork Lolo Creek	54	56	63.4
	46	Lower Lolo Creek	95	32	45.6
2a-16	48	O'Brien Creek	27	33	13.7

MONTANA WELL LOG REPORT

Form No 603 R2-99

Well ID#

This log reports the activities of a licensed Montana well dri... amount of water encountered. This form is to be comple... er Rights is the well owner's responsibility and is r... rmation Center at the Montana Bureau of Mines and G... elds that are not applicable, enter NA. *Optional fields are in Italics.* Record additional information in the REMARKS section.

Appendix C

...rk done within the borehole and casing and describes th... within 60 days of completion of the work. According... port. Well log information is stored in the groundwater ... is stored in the Water Rights Bureau records (Helena).

1. WELL OWNER:
   Name ERIC AND DIANA HENDRICKSEN #1
   Mailing address 628 BITTERROOT DRIVE
   FLORENCE, MT 59833

2. WELL LOCATION: List ¼ from smallest to largest
   ___ ¼ NW ¼ NW ¼ SE ¼ Section 6
   Township 10 N Range 19 W County Ravalli
   Lot ___ *Tract/Blk* ___ *Subdivision Name* ___
   Well Address 8 MILE/LOWER WOODCHUCK
   GPS ☐ *Yes* ☑ *No*
   Latitude ___ *Longitude* ___
   Error as reported by GPS locator (± feet)
   Horizontal datum ☐ *NAD27* ☑ *WGS84*

3. PROPOSED USE: ☐ Domestic ☐ Stock ☐ Irrigation
   ☐ Public water supply ☐ Monitoring Well ☑ Other: TEST WELL

4. TYPE OF WORK:
   ☑ New well ☐ Deepen existing well ☐ Abandon existing well
   Method: ☐ Cable ☑ Rotary ☐ Other: ___

5. WELL CONSTRUCTION DETAILS:
   Borehole:
   Dia. 6 in. from 0 ft. to 120 ft.
   Dia. ___ in. from ___ ft. to ___ ft.
   Dia. ___ in. from ___ ft. to ___ ft.
   asing:
   Steel: Wall thickness. 0.25" ☐ Threaded ☑ Welded
   Dia. 6 in. from +1.5 ft. to 120 ft.
   Dia. ___ in. from ___ ft. to ___ ft.

   Plastic: Pressure Rating ___ lbs. ☐ Threaded ☑ Welded
   Dia. ___ in. from ___ ft. to ___ ft.

   Perforations/Slotted Pipe:
   Type of perforator used HOLTE
   Size of perforations/slots 1/8 in. by 5 in.
   30 no. of perforations/slots from 55 ft. to 60 ft.
   12 no. of perforations/slots from 76 ft. to 78 ft.
   Screens: ☐ Yes ☑ No
   Material ___
   Dia. ___ Slot size ___ from ___ ft. to ___ ft.
   Dia. ___ Slot size ___ from ___ ft. to ___ ft.
   Gravel Packed: ☐ Yes ☑ No
   Size of gravel ___
   Gravel placed from ___ ft. to ___ ft.
   Packer: ☐ Yes ☑ No
   Type ___ Depth(s) ___
   Grout: Material used: Bentonite
   Depth from ___ ft. to ___ ft. OR ☑ Continuous feed

6. WELL TEST DATA:
   A well test is required for all wells. *(See details on well log report cover.)*
   ☑ Static water level 55 ft. below top of casing or
   ☐ Closed-in artesian pressure ___ psi.
   How was test flow measured:
   ...et/stopwatch, weir, flume, meter, etc BUCKET/STOPWATCH
   ...one groundwater closure area only - Water Temperature ___ °F
   ☐ AQUIFER TEST DATA FORM ATTACHED

   Test - 1 hour minimum
   Drawdown is the amount water level is lowered below static level
   All depth measurements shall be from the top of the well casing.
   Time of recovery is hours/minutes since pumping stopped.
   Air test*
   75+ gpm with drill stem set at 120 ft. for 1 hour(s)
   Time of recovery 20 mins. Recovery water level 55

   OR Bailer test*
   ___ gpm with ___ ft. of drawdown after ___ hours
   Time of recovery ___ hrs/min. Recovery water level ___

   OR Pump test*
   Depth pump set for test ___ ft.
   ___ gpm pump rate with ___ ft. of drawdown after ___ hrs pump
   Time of recovery ___ hrs/min. Recovery water level ___

   OR Flowing Artesian*
   ___ gpm for ___ hours
   Flow controlled by ___

   **During the well test the discharge rate shall be as uniform as possible. This rate may may not be the sustainable yield of the well. Sustainable yield does not include the reservoir of the well casing.*

7. WELL LOG:

Depth, Feet From	Depth, Feet To	Material. Colorrock and type/descriptor (example: blue/shale/hard, or brown gravel/water, or brown/sand/heaving)
0	1	TOP SOIL
1	22	SAND, GRAVEL, COBBLES
22	73	SAND, GRAVEL, W.B. – 8 GPM
73	84	TAN CLAY
84	95	SAND, SILT
95	108	SAND, GRAVEL, W.B. – 30 GPM
108	113	SILT, GRAVEL (RED)
113	120	SILT, TAN CLAY

☐ ADDITIONAL SHEETS ATTACHED

8. DATE WELL COMPLETED: 10/31/04

9. *REMARKS:* 36 PERFORATIONS FROM 95 TO 107 DONE WITH HOLTE PERFORATOR.

10. DRILLER/CONTRACTOR'S CERTIFICATION:
All work performed and reported in this well log is in compliance with the Montana well construction standards. This report is true to the best of my knowledge.
Name, firm, or corporation (print) AQWA DRILLING, LLC
Address 594 SHERIDAN DRIVE, HAMILTON, MT 59840
Signature ___
Date 11/4/04 License no. 589

Form No. 503 R2-99

MONTANA WELL LOG REPORT

Well ID#

This log reports the activities of a licensed Montana we done within the borehole and casing and desc th amount of water encountered. This form is to be complet within 60 days of completion of the work. Ac Water Rights is the well owner's responsibility and is no port. Well log information is stored in the Groundw nformation Center at the Montana Bureau of Mines and Ge s stored in the Water Rights Bureau records (Helena, fields that are not applicable, enter NA. *Optional fields a* t in the REMARKS section.

Appendix D

1. WELL OWNER:
   Name ERIC AND DIANA HENDRICKSEN #2
   Mailing address 626 BITTERROOT DRIVE
   FLORENCE, MT 59833

2. WELL LOCATION: List ¼ from smallest to largest
   ___ ¼ NW ¼ NW ¼ SE ¼ Section 6
   Township 10 N Range 19 W County Ravalli
   Lot ___ Tract/Blk ___ Subdivision Name ___
   Well Address 8 MILE/LOWER WOODCHUCK
   GPS ☐ Yes ☑ No
   Latitude ___ Longitude ___
   Error as reported by GPS locator (+ feet)
   Horizontal datum ☐ NAD27 ☑ WGS84

3. PROPOSED USE: ☐ Domestic ☐ Stock ☐ Irrigation
   ☐ Public water supply ☐ Monitoring Well ☑ Other: TEST WELL

4. TYPE OF WORK:
   ☑ New well ☐ Deepen existing well ☐ Abandon existing well
   Method: ☐ Cable ☑ Rotary ☐ Other: ___

5. WELL CONSTRUCTION DETAILS:
   Borehole:
   Dia. 6 in. from 0 ft. to 160 ft.
   Dia ___ in. from ___ ft. to ___ ft.
   Dia. ___ in. from ___ ft. to ___ ft.
   Casing:
   Steel: Wall thickness: 0.25" ☐ Threaded ☑ Welded
   Dia. 6 in. from +1.5 ft. to 160 ft.
   Dia. ___ in. from ___ ft. to ___ ft.
   Plastic: Pressure Rating ___ lbs. ☐ Threaded ☑ Welded
   Dia. ___ in. from ___ ft. to ___ ft.
   Perforations/Slotted Pipe:
   Type of perforator used HOLTE
   Size of perforations/slots 1/8 in. by 5 in.
   130 no. of perforations/slots from 102 ft. to 125 ft.
   90 no. of perforations/slots from 137 ft. to 152 ft.
   Screens: ☐ Yes ☑ No
   Material ___
   Dia ___ Slot size ___ from ___ ft. to ___ ft.
   Dia. ___ Slot size ___ from ___ ft. to ___ ft.
   Gravel Packed: ☐ Yes ☑ No
   Size of gravel ___
   Gravel placed from ___ ft. to ___ ft.
   Packer: ☐ Yes ☑ No
   Type ___ Depth(s) ___
   Grout: Material used: Bentonite
   Depth from ___ ft. to ___ ft. OR ☑ Continuous feed

6. WELL TEST DATA:
   A well test is required for all wells. *(See details on well log report cover.)*
   ☑ Static water level 70 ft. below top of casing or
   ☐ Closed-in artesian pressure ___ psi
   How was test flow measured:
   Bucket/stopwatch, weir, flume, flow meter, etc BUCKET/STOPWATCH
   Yellowstone groundwater closure area only - Water Temperature ___ °F
   ☐ AQUIFER TEST DATA FORM ATTACHED

   Test - 1 hour minimum
   Drawdown is the amount water level is lowered below static level.
   All depth measurements shall be from the top of the well casing.
   Time of recovery is hours/minutes since pumping stopped.
   Air test*
   75+ gpm with drill stem set at 160 ft. for 1 hour(s)
   Time of recovery 30 mins. Recovery water level 70
   OR Bailer test*
   ___ gpm with ___ ft. of drawdown after ___ hours
   Time of recovery ___ hrs/min. Recovery water level ___
   OR Pump test*
   Depth pump set for test ___ ft.
   ___ gpm pump rate with ___ ft. of drawdown after ___ hrs pump
   Time of recovery ___ hrs/min. Recovery water level ___
   OR Flowing Artesian*
   ___ gpm for ___ hours
   Flow controlled by ___
   "During the well test the discharge rate shall be as uniform as possible. This rate may not be the sustainable yield of the well. Sustainable yield does not include the reservoir of the well casing.

7. WELL LOG:

Depth, Feet		Material: Color/rock and type/descriptor (example: blue/shale/hard, gravel/water, or brown/sand/heaving)
From	To	
0	1	TOP SOIL
1	22	SAND, GRAVEL, COBBLES
22	68	SAND, SILT
68	80	SAND, GRAVEL, W.B – 12 GPM
80	81	SILT, BROWN CLAY
81	95	SILT, SAND
95	103	SILT, BROWN CLAY
103	159	SAND, GRAVEL, W.B – 60 GPM
159	160	BROWN CLAY

☐ ADDITIONAL SHEETS ATTACHED

8. DATE WELL COMPLETED: 10/31/04

9. *REMARKS:* ___

10. DRILLER/CONTRACTOR'S CERTIFICATION:
All work performed and reported in this well log is in compliance with the Montana well construction standards. This report is true to the best of my knowledge.
Name, firm, or corporation (print) AQWA DRILLING, LLC
Address 594 SHERIDAN DRIVE HAMILTON, MT 59840
Signature ___
Date 11/4/04 License no. 589

MBMG ID #

MONTANA WELL LOG RE. ORT

Form No. 503 R2-99

Well ID#

This log reports the activities of a licensed Montana well driller and serves as the official record of work done within the borehole and casing and describes the amount of water encountered. This form is to be completed by the driller and filed with DNRC within 60 days of completion of the work. Acquiring Water Rights is the well owner's responsibility and is not accomplished by the filing of this report. Well log information is stored in the Groundwater Information Center at the Montana Bureau of Mines and Geology (Butte) and water right information is stored in the Water Rights Bureau records (Helena). For fields that are not applicable, enter NA. *Optional fields are in italics.* Record additional information in the REMARKS section.

1. **WELL OWNER:**
   Name ERIC AND DIANA HENDRICKSEN #3
   Mailing address 826 BITTERROOT DRIVE
   FLORENCE, MT 59833

2. **WELL LOCATION:** List ¼ from smallest to largest
   ___ ¼ NW ¼ NW ¼ SE ¼ Section 6
   Township 10 N Range 19 W County Ravalli
   Lot ___ *Tract/Blk* ___ *Subdivision Name* ___
   Well Address 8 MILE/LOWER WOODCHUCK
   GPS ☐ *Yes* ☑ *No*
   Latitude ___ *Longitude* ___
   Error as reported by GPS locator (± feet)
   Horizontal datum ☐ *NAD27* ☑ *WGS84*

3. **PROPOSED USE:** ☐ Domestic ☐ Stock ☐ Irrigation
   ☐ Public water supply ☐ Monitoring Well ☑ Other: TEST WELL

4. **TYPE OF WORK:**
   ☑ New well ☐ Deepen existing well ☐ Abandon existing well
   Method: ☐ Cable ☑ Rotary ☐ Other: ___

5. **WELL CONSTRUCTION DETAILS:**
   Borehole:
   Dia. 6 in. from 0 ft. to 78 ft.
   Dia. ___ in. from ___ ft. to ___ ft.
   Dia. ___ in. from ___ ft. to ___ ft.
   Casing:
   Steel: Wall thickness: 0.25" ☐ Threaded ☑ Welded
   Dia. 6 in. from +1.5 ft. to 78 ft.
   Dia. ___ in. from ___ ft. to ___ ft.

   Plastic: Pressure Rating ___ lbs. ☐ Threaded ☑ Welded
   Dia. ___ in. from ___ ft. to ___ ft.

   Perforations/Slotted Pipe:
   Type of perforator used TORCH
   Size of perforations/slots 1/8 in. by 5 in.
   10 no. of perforations/slots from 73 ft. to 78 ft.
   ___ no. of perforations/slots from ___ ft. to ___ ft.
   Screens: ☐ Yes ☑ No
   Material ___
   Dia ___ Slot size ___ from ___ ft. to ___ ft.
   Dia. ___ Slot size ___ from ___ ft. to ___ ft.
   Gravel Packed: ☐ Yes ☑ No
   Size of gravel ___
   Gravel placed from ___ ft. to ___ ft.
   Packer: ☐ Yes ☑ No
   Type ___ Depth(s) ___
   Grout: Material used: Bentonite
   Depth from ___ ft. to ___ ft. OR ☑ Continuous feed

6. **WELL TEST DATA:**
   A well test is required for all wells. *(See details on well log report cover.)*
   ☑ Static water level 70 ft. below top of casing or
   ☐ Closed-in artesian pressure ___ psi.
   How was test flow measured:
   bucket/stopwatch, weir, flume, flow meter, etc BUCKET/STOPWATCH
   Stone groundwater closure area only - Water Temperature ___ °F
   ☐ AQUIFER TEST DATA FORM ATTACHED

   Test - 1 hour minimum
   Drawdown is the amount water level is lowered below static level.
   All depth measurements shall be from the top of the well casing.
   Time of recovery is hours/minutes since pumping stopped.
   Air test*
   12 gpm with drill stem set at 77 ft. for 1 hour(s)
   Time of recovery 10 mins. Recovery water level 70

   OR Bailer test*
   ___ gpm with ___ ft. of drawdown after ___ hours
   Time of recovery ___ hrs/min Recovery water level ___

   OR Pump test*
   Depth pump set for test ___ ft.
   ___ gpm pump rate with ___ ft. of drawdown after ___ hrs pump
   Time of recovery ___ hrs/min Recovery water level ___

   OR Flowing Artesian*
   ___ gpm for ___ hours
   Flow controlled by ___

   "During the well test the discharge rate shall be as uniform as possible. This rate may may not be the sustainable yield of the well. Sustainable yield does not include the reservoir of the well casing.

7. **WELL LOG:**

Depth, Feet		Material: Color/rock and type descriptor (example: blue/shale/hard, or brown gravel/water, or brown/sand/heaving)
From	To	
0	1	TOP SOIL
1	28	SAND, GRAVEL, COBBLES
28	78	SAND, GRAVEL W.B.

☐ ADDITIONAL SHEETS ATTACHED

8. **DATE WELL COMPLETED:** 10/30/04

9. ***REMARKS:*** ___

10. **DRILLER/CONTRACTOR'S CERTIFICATION:**
    All work performed and reported in this well log is in compliance with the Montana well construction standards. This report is true to the best of my knowledge.
    Name, firm, or corporation (print) AQWA DRILLING, LLC
    Address 594 SHERIDAN DRIVE, HAMILTON, MT 59840
    Signature ___
    Date 11/4/04 License no. 589

Appendix E

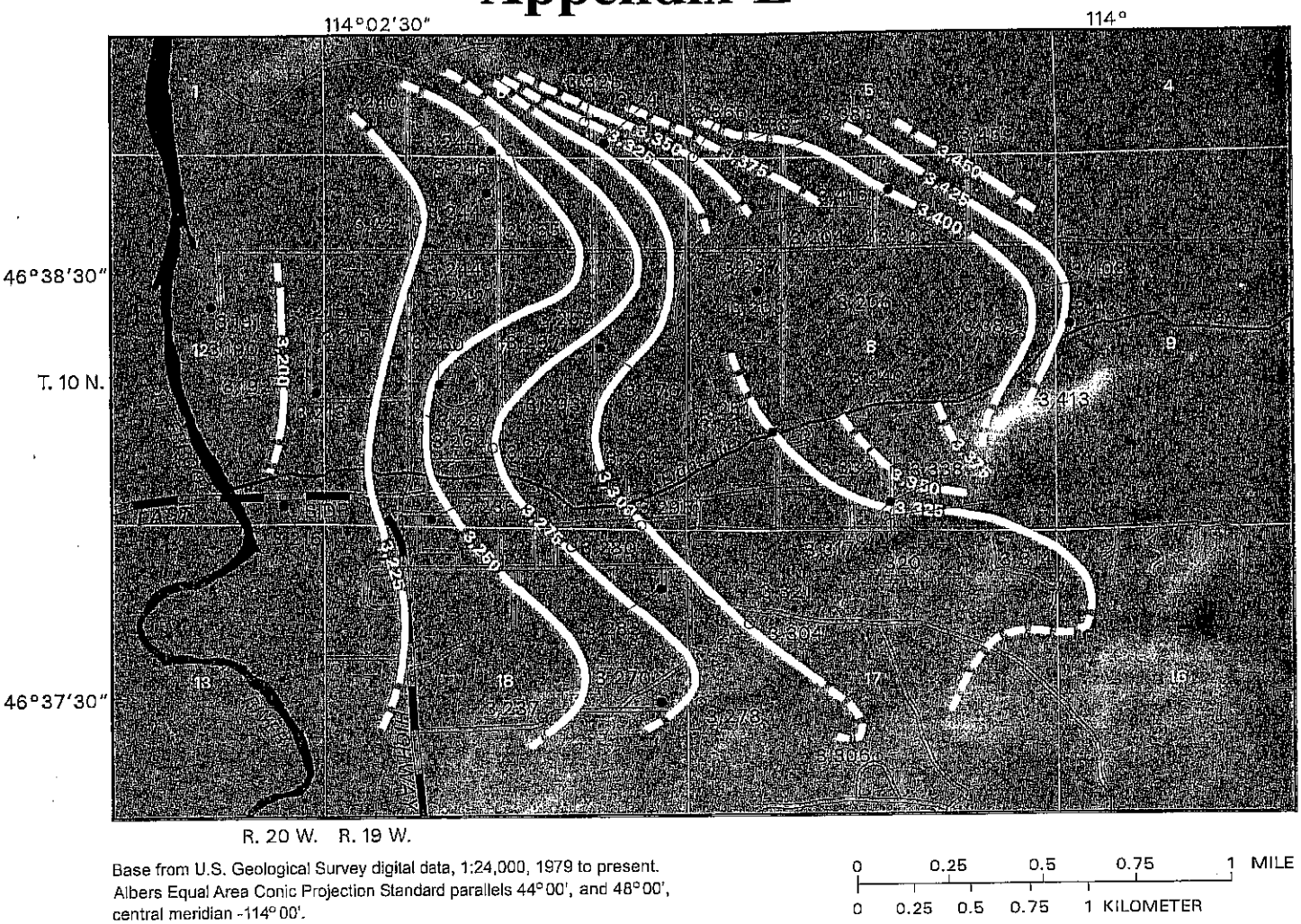


Figure 8. Altitude of the water-level surface and location of monitoring wells in the Eightmile area, 1995.

Appendix F

TABLE IV.
PEAK FLOWFOR THE BITTERROOT RIVER AND TRIBUTARIES
25-Year Frequency

Water-shed	Sub-Basin	Name	25-Year Peak Flow cfs*
2a3-1	1	West Fork Bitterroot River below Overwhich Cr.	5,960
	2	Hughes Creek at Mouth	1,080
	3	Overwhich Creek at Mouth	890
	4	Blue Joint Creek at Mouth	1,160
	4	West Fork Bitterroot River above Nez Perce Cr.	4,470
2a3-2	5	Piquett Creek at Mouth	520
	6	Nez Perce Fork Bitterroot at Mouth	2,100
	7	Boulder Creek at Mouth	1,120
	8	Trapper Creek at Mouth	1,290
	17	West Fork Bitterroot River at Mouth	7,870
	17	Chaffin Creek at Mouth	610
	19	Tin Cup Creek at Mouth	1,530
	20	Rock Creek at Mouth	2,490
2a3-3	9	East Fork Bitterroot above Moose Creek	1,070
	10	Moose Creek at Mouth	620
	10	East Fork Bitterroot below Moose Creek	1,660
	11	Meadow Creek at Mouth	630
	12	Cameron Creek at Mouth	320
	13	Tolan Creek at Mouth	390
	14	Camp Creek at Mouth	490
	15	East Fork Bitterroot above Warm Springs Creek	3,210
	15	Warm Springs Creek at Mouth	670
2a3-4	16	East Fork Bitterroot at Mouth	4,090
	16	Bitterroot River above Rye Creek	11,500
	16	Rye Creek at Mouth	440
	23	Sleeping Child Creek at Mouth	730
	24	Skalkaho Creek at Mouth	1,090
	25	Gird Creek at Mouth	240
2a3-5	21	Lost Horse Creek at Mouth	2,740
	22	Roaring Lion Creek at Mouth	1,140
	26	Sawtooth Creek at Mouth	1,400
	26	Bitterroot River above Blodgett Creek	19,580

(Continued)

*Cubic feet per second

Appendix F

TABLE IV. (Continued)
PEAK FLOW FOR THE BITTERROOT RIVER AND TRIBUTARIES
25-Year Frequency

Water-shed	Sub-Basin	Name	25-Year Peak Flow cfs*
2a3-6	28	Blodgett Creek at Mouth	1,560
	29	Mill Creek at Mouth	1,780
	31	Fred Burr Creek at Mouth	1,110
2a3-6A	32	Bear Creek at Mouth	1,280
2a3-6B	33	Sweathouse Creek at Mouth	920
	34	Big Creek at Mouth	1,500
2a3-7	27	Willow Creek at Mouth	270
2a3-7A	35	Burnt Fork Creek at Mouth	800
2a3-8	36	Kootenai Creek at Mouth	1,440
	36	Bitterroot River above Bass Creek	24,880
	37	Ambrose Creek at Mouth	360
	38	Bass Creek at Mouth	900
	39	Sweeney Creek at Mouth	1,130
	40	Eight Mile Creek at Mouth	130
	40	Bitterroot River at County Line	26,550
2a3-9	41	Carlton Creek at Mouth	540
2a3-10	43	Lolo Creek below Granite Creek	1,350
	44	Lolo Creek above South Fork Lolo Creek	2,440
	45	South Fork Lolo Creek at Mouth	1,180
	46	Lolo Creek below South Fork Lolo Creek	3,580
	46	Lolo Creek at Mouth	4,700
2a-16	47	Miller Creek at Mouth	240
	48	Bitterroot River at Mouth	29,500

*Cubic feet per second

Appendix G

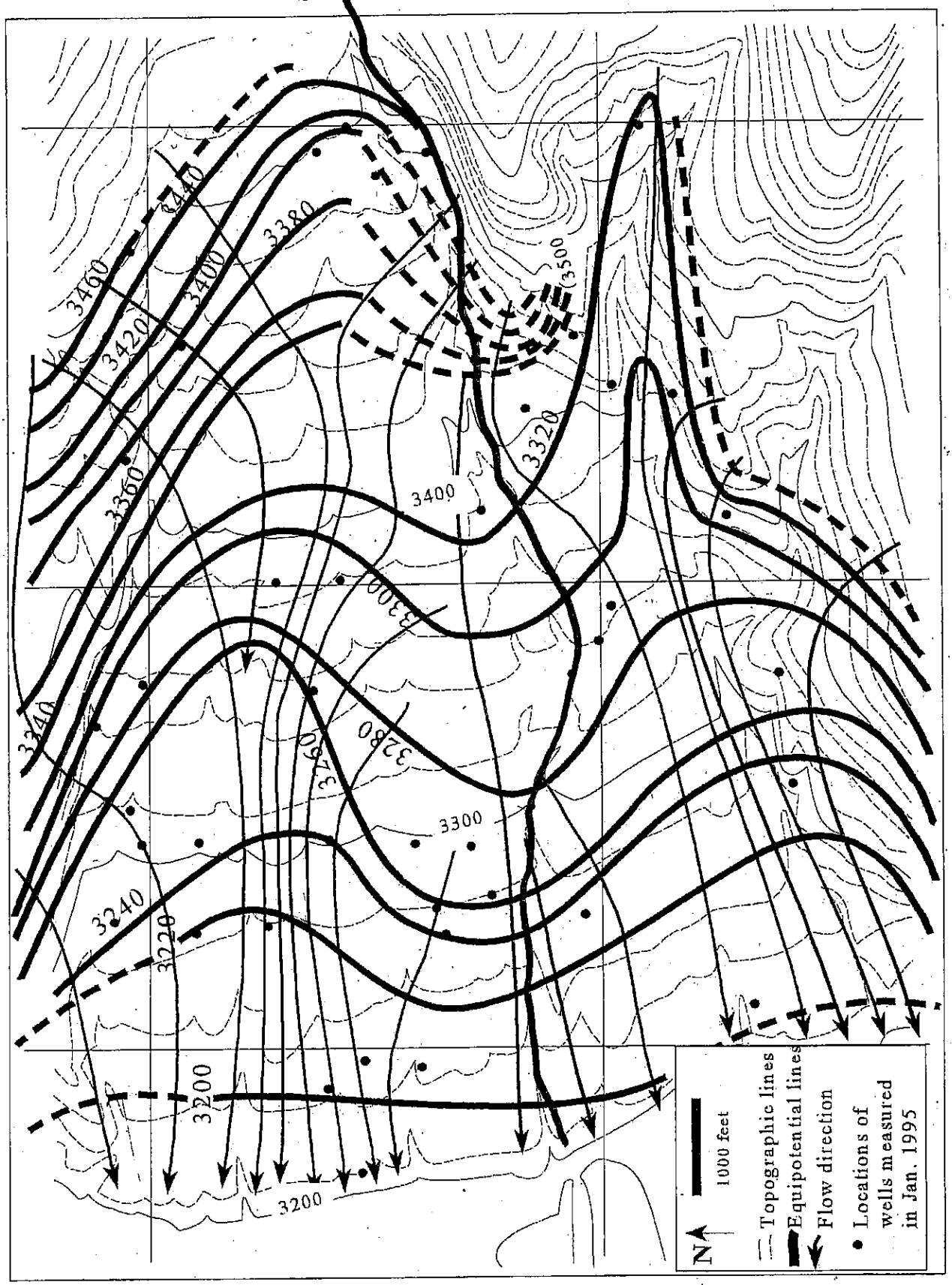


Figure 3.6. Potentiometric Surface and Flow Direction Map of Aquifer EM-1, January 1995

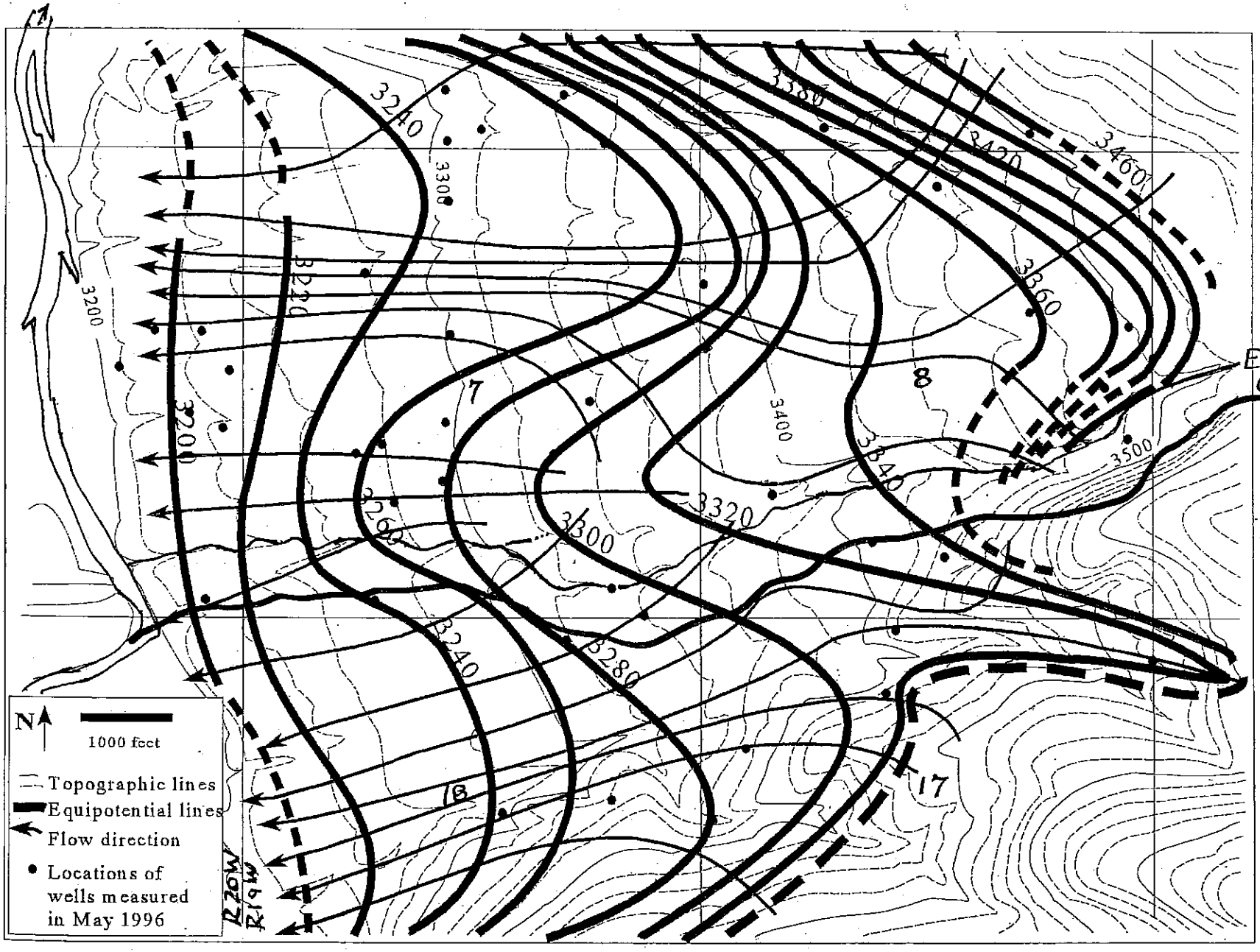
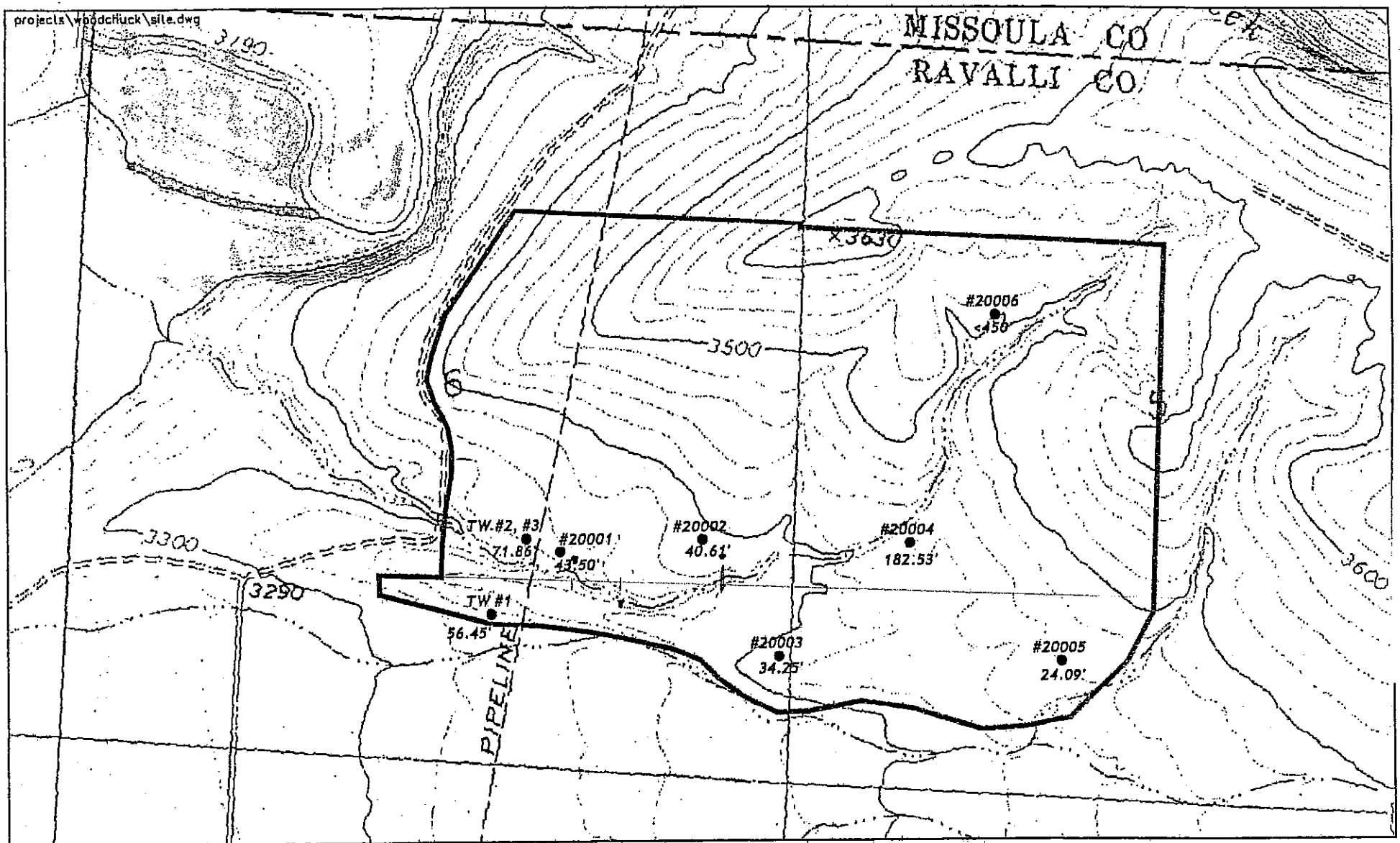


Figure 3.7. Potentiometric Surface and Flow Direction Map of Aquifer EM-1, May 1996



From USGS 7.5' Florence Quad

September 2004

40.61' Static water level below casing collar (in feet)

● Test Well (Locations Approximate)

Test Well Locations
Woodchuck Water Supply
Wesmont Builders
Florence, Montana
FIGURE 2

TECHNOLOGIES INC® 4570522

Appendix I

Form No. 503 R2-99

MONTANA WELL LOG REPORT

Well ID#

This log reports the activities of a licensed Montana well driller and serves as the official record of work done within the borehole and casing and describes the amount of water encountered. This form is to be completed by the driller and filed with DNRC within 60 days of completion of the work. Act of Water Rights is the well owner's responsibility and is not accomplished by the filing of this report. Well log information is stored in the Ground Information Center at the Montana Bureau of Mines and Geology (Butte) and water right information is stored in the Water Rights Bureau records (Helena). If fields that are not applicable, enter NA. *Optional fields are in italics.* Record additional information in the REMARKS section.

1. WELL OWNER:
Name ERIC AND DIANA HENDRICKSEN #20001
Mailing address 626 BITTERROOT DRIVE
FLORENCE, MT 59833

2. WELL LOCATION: List ¼ from smallest to largest
___ ¼ NW ¼ NW ¼ SE ¼ Section 6
Township 10 N Range 19 W County Ravalli
Lot ___ *Tract/Blk* ___ *Subdivision Name* ___
Well Address 8 MILE/LOWER WOODCHUCK
GPS ☐ *Yes* ☑ *No*
Latitude ___ *Longitude* ___
Error as reported by GPS locator (± feet)
Horizontal datum ☐ *NAD27* ☑ *WGS84*

3. PROPOSED USE: ☐ Domestic ☐ Stock ☐ Irrigation
☐ Public water supply ☐ Monitoring Well ☑ Other: TEST WELL

4. TYPE OF WORK:
☑ New well ☐ Deepen existing well ☐ Abandon existing well
Method: ☐ Cable ☑ Rotary ☐ Other: ___

5. WELL CONSTRUCTION DETAILS:
Borehole:
Dia 6 in from 0 ft. to 61 ft.
Dia. ___ in. from ___ ft. to ___ ft.
Dia. ___ in. from ___ ft. to ___ ft.
Casing:
Steel: Wall thickness: 0.25" ☐ Threaded ☑ Welded
Dia. 6 in. from +1.5 ft. to 61 ft.
Dia. ___ in. from ___ ft. to ___ ft.

Plastic: Pressure Rating ___ lbs. ☐ Threaded ☑ Welded
Dia. ___ in. from ___ ft. to ___ ft.

Perforations/Slotted Pipe:
Type of perforator used TORCH
Size of perforations/slots 1/8 in. by 5 in.
10 no. of perforations/slots from 58 ft. to 61 ft.
___ no. of perforations/slots from ___ ft. to ___ ft.
Screens: ☐ Yes ☑ No
Material ___
Dia. ___ Slot size ___ from ___ ft. to ___ ft.
Dia. ___ Slot size ___ from ___ ft. to ___ ft.
Gravel Packed: ☐ Yes ☑ No
Size of gravel ___
Gravel placed from ___ ft. to ___ ft.
Packer: ☐ Yes ☑ No
Type ___ Depth(s) ___
Grout: Material used: Bentonite
Depth from ___ ft. to ___ ft. OR ☑ Continuous feed

6. WELL TEST DATA:
A well test is required for all wells. *(See details on well log report cover.)*
☑ Static water level 43 ft. below top of casing or
☐ Closed-in artesian pressure ___ psi.
How was test flow measured:
bucket/stopwatch, weir, flume, flow meter, etc. BUCKET/STOPWATCH
Yellowstone groundwater closure area only - Water Temperature ___ °F
☐ AQUIFER TEST DATA FORM ATTACHED

Test - 1 hour minimum
Drawdown is the amount water level is lowered below static level.
All depth measurements shall be from the top of the well casing.
Time of recovery is hours/minutes since pumping stopped.
Air test*
15 gpm with drill stem set at 60 ft. for 1 hour(s)
Time of recovery 30 mins. Recovery water level 43

OR Bailer test*
___ gpm with ___ ft. of drawdown after ___ hours
Time of recovery ___ hrs/min. Recovery water level ___

OR Pump test*
Depth pump set for test ___ ft.
___ gpm pump rate with ___ ft. of drawdown after ___ hrs pump
Time of recovery ___ hrs/min. Recovery water level ___

OR Flowing Artesian*
___ gpm for ___ hours
Flow controlled by ___

**During the well test the discharge rate shall be as uniform as possible. This rate may may not be the sustainable yield of the well. Sustainable yield does not include the reservoir of the well casing.*

7. WELL LOG:

Depth, Feet From	Depth, Feet To	Material: Color, rock and type/descriptor (example: blue/shale/hard, c... gravel/water, or brown/sand/heaving)
0	1	TOP SOIL
1	30	SAND, GRAVEL, BOULDERS
30	55	SAND, GRAVEL
55	58	SAND, GRAVEL, W.B. – 15 GPM
58	61	CLAY

☐ ADDITIONAL SHEETS ATTACHED
8. DATE WELL COMPLETED: 10/30/04
9. *REMARKS:* ___

10. DRILLER/CONTRACTOR'S CERTIFICATION:
All work performed and reported in this well log is in compliance with the Montana well construction standards. This report is true to the best of my knowledge.
Name, firm, or corporation (print) AQWA DRILLING, LLC
Address 594 SHERIDAN DRIVE, HAMILTON, MT 59840
Signature ___
Date 11/04/04 License no. 589

Form No 603 R2-99

MONTANA WELL LOG REPORT

Well ID#

This log reports the activities of a licensed Montana well driller and serves as the official record of work done within the borehole and casing and describes the amount of water encountered. This form is to be completed by the driller and filed with DNRC within 60 days of completion of the work. Acquiring Water Rights is the well owner's responsibility and is not accomplished by the filing of this report. Well log information is stored in the Groundwater Information Center at the Montana Bureau of Mines and Geology (Butte) and water right information is stored in the Water Rights Bureau records (Helena). For fields that are not applicable, enter NA. *Optional fields are in italics.* Record additional information in the REMARKS section.

1. WELL OWNER:
   Name ERIC AND DIANA HENDRICKSEN #20002
   Mailing address 626 BITTERROOT DRIVE
   FLORENCE, MT 59833

2. WELL LOCATION: List ¼ from smallest to largest
   ____ ¼ NW ¼ NW ¼ SE ¼ Section 6
   Township 10 N Range 19 W County Ravalli
   Lot ____ *Tract/Blk* ____ *Subdivision Name* ____
   Well Address 8 MILE/LOWER WOODCHUCK
   GPS ☐ *Yes* ☑ *No*
   Latitude ____ *Longitude* ____
   Error as reported by GPS locator (± feet)
   Horizontal datum ☐ *NAD27* ☑ *WGS84*

3. PROPOSED USE: ☐ Domestic ☐ Stock ☐ Irrigation
   ☐ Public water supply ☐ Monitoring Well ☑ Other: TEST WELL

4. TYPE OF WORK:
   ☑ New well ☐ Deepen existing well ☐ Abandon existing well
   Method: ☐ Cable ☑ Rotary ☐ Other: ____

5. WELL CONSTRUCTION DETAILS:
   Borehole:
   Dia. 6 in. from 0 ft. to 61 ft.
   Dia. ____ in. from ____ ft. to ____ ft.
   Dia. ____ in. from ____ ft. to ____ ft.
   Casing:
   Steel: Wall thickness: 0.25" ☐ Threaded ☑ Welded
   Dia. 6 in. from +1.5 ft. to 61 ft.
   Dia. ____ in. from ____ ft. to ____ ft.

   Plastic: Pressure Rating ____ lbs. ☐ Threaded ☑ Welded
   Dia. ____ in. from ____ ft. to ____ ft.

   Perforations/Slotted Pipe:
   Type of perforator used TORCH
   Size of perforations/slots 1/8 in. by 5 in.
   10 no. of perforations/slots from 56 ft. to 61 ft.
   ____ no. of perforations/slots from ____ ft. to ____ ft.
   Screens: ☐ Yes ☑ No
   Material ____
   Dia. ____ Slot size ____ from ____ ft. to ____ ft.
   Dia. ____ Slot size ____ from ____ ft. to ____ ft.
   Gravel Packed: ☐ Yes ☑ No
   Size of gravel ____
   Gravel placed from ____ ft. to ____ ft.
   Packer: ☐ Yes ☑ No
   Type ____ Depth(s) ____
   Grout: Material used: Bentonite
   Depth from ____ ft. to ____ ft. OR ☑ Continuous feed

6. WELL TEST DATA:
   A well test is required for all wells. *(See details on wea log report cover.)*
   ☑ Static water level 28 ft. below top of casing or
   ☐ Closed-in artesian pressure ____ psi.
   How was test flow measured:
   Bucket/stopwatch, weir, flume, flow meter, etc BUCKET/STOPWATCH
   Done groundwater closure area only - Water Temperature ____ °F
   ☐ AQUIFER TEST DATA FORM ATTACHED

   Test - 1 hour minimum
   Drawdown is the amount water level is lowered below static level
   All depth measurements shall be from the top of the well casing.
   Time of recovery is hours/minutes since pumping stopped.
   Air test*
   20 gpm with drill stem set at 60 ft. for 1 hour(s)
   Time of recovery 30 mins. Recovery water level 28

   OR Bailer test*
   ____ gpm with ____ ft. of drawdown after ____ hours
   Time of recovery ____ hrs/min. Recovery water level ____

   OR Pump test*
   Depth pump set for test ____ ft.
   ____ gpm pump rate with ____ ft. of drawdown after ____ hrs pump
   Time of recovery ____ hrs/min. Recovery water level ____

   OR Flowing Artesian*
   ____ gpm for ____ hours
   Flow controlled by ____

   "During the well test the discharge rate shall be as uniform as possible. This rate may may not be the sustainable yield of the well. Sustainable yield does not include the reservoir of the well casing.

7. WELL LOG:

Depth, Feet From	Depth, Feet To	Material: Color/rock and type/descriptor (example: blue/shale/hard, or brown gravel/water, or brown/sand/heaving)
0	1	TOP SOIL
1	50	SAND, GRAVEL, BOULDERS
50	61	SAND, GRAVEL, W.B. – 20 GPM

☐ ADDITIONAL SHEETS ATTACHED

8. DATE WELL COMPLETED: 10/31/04

9. *REMARKS:* ____

10. DRILLER/CONTRACTOR'S CERTIFICATION:
    All work performed and reported in this well log is in compliance with the Montana well construction standards. This report is true to the best of my knowledge.
    Name, firm, or corporation (print) AQWA DRILLING, LLC
    Address 594 SHERIDAN DRIVE, HAMILTON, MT 59840
    Signature ____
    Date 11/4/04 License no. 589

Form No. 503 R2-99

MONTANA WELL LOG REPORT

Well ID#

This log reports the activities of a licensed Montana well driller and serves as the official record of work done within the borehole and casing and describes the amount of water encountered. This form is to be completed by the driller and filed with DNRC within 60 days of completion of the work-- Acq Water Rights is the well owner's responsibility and is not accomplished by the filing of this report. Well log information is stored in the Groundw... Information Center at the Montana Bureau of Mines and Geology (Butte) and water right information is stored in the Water Rights Bureau records.(Helena). fields that are not applicable, enter NA. *Optional fields are in italics.* Record additional information in the REMARKS section.

1. WELL OWNER:
Name ERIC AND DIANA HENDRICKSEN #20003
Mailing address 626 BITTERROOT DRIVE
FLORENCE, MT 59833

2. WELL LOCATION: List ¼ from smallest to largest
__ ¼ NW ¼ NW ¼ SE ¼ Section 6
Township 10 N Range 19 W County Ravalli
Lot ___ *Tract/Blk* ___ *Subdivision Name* ___
Well Address 8 MILE/LOWER WOODCHUCK
GPS ☐ *Yes* ☑ *No*
Latitude ___ *Longitude* ___
Error as reported by GPS locator (+ feet)
Horizontal datum ☐ *NAD27* ☑ *WGS84*

3 PROPOSED USE: ☐ Domestic ☐ Stock ☐ Irrigation
☐ Public water supply ☐ Monitoring Well ☑ Other: TEST WELL

4. TYPE OF WORK:
☑ New well ☐ Deepen existing well ☐ Abandon existing well
Method: ☐ Cable ☑ Rotary ☐ Other: ___

5. WELL CONSTRUCTION DETAILS:
Borehole:
Dia. 6 in. from 0 ft. to 56 ft.
Dia. ___ in. from ___ ft. to ___ ft.
Dia. ___ in. from ___ ft. to ___ ft.
Casing:
Steel: Wall thickness: 0.25" ☐ Threaded ☑ Welded
Dia. 6 in. from +1.5 ft. to 56 ft.
Dia. ___ in. from ___ ft. to ___ ft.

Plastic: Pressure Rating ___ lbs. ☐ Threaded ☑ Welded
Dia. ___ in. from ___ ft. to ___ ft.

Perforations/Slotted Pipe:
Type of perforator used ___
Size of perforations/slots ___ in. by ___ in.
___ no. of perforations/slots from ___ ft. to ___ ft.
___ no. of perforations/slots from ___ ft. to ___ ft.
Screens: ☐ Yes ☑ No
Material ___
Dia. ___ Slot size ___ from ___ ft. to ___ ft.
Dia. ___ Slot size ___ from ___ ft. to ___ ft.
Gravel Packed: ☐ Yes ☑ No
Size of gravel ___
Gravel placed from ___ ft. to ___ ft.
Packer: ☐ Yes ☑ No
Type ___ Depth(s) ___
Grout: Material used: Bentonite
Depth from ___ ft. to ___ ft. OR ☑ Continuous feed

WELL TEST DATA:
A well test is required for all wells. *(See details on well log report cover.)*
☑ Static water level 23 ft. below top of casing or
☐ Closed-in artesian pressure ___ psi.
How was test flow measured:
bucket/stopwatch, weir, flume, flow meter, etc BUCKET/STOPWATCH
Yellowstone groundwater closure area only - Water Temperature ___ °F
☐ AQUIFER TEST DATA FORM ATTACHED

Test - 1 hour minimum
Drawdown is the amount water level is lowered below static level.
All depth measurements shall be from the top of the well casing.
Time of recovery is hours/minutes since pumping stopped.
Air test*
15 gpm with drill stem set at 56 ft. for 1 hour(s)
Time of recovery 30 mins. Recovery water level 23 ft

OR Bailer test*
___ gpm with ___ ft. of drawdown after ___ hours
Time of recovery ___ hrs/min. Recovery water level ___ ft

OR Pump test*
Depth pump set for test ___ ft.
___ gpm pump rate with ___ ft. of drawdown after ___ hrs pumpi
Time of recovery ___ hrs/min. Recovery water level ___

OR Flowing Artesian*
___ gpm for ___ hours
Flow controlled by ___

**During the well test the discharge rate shall be as uniform as possible. This rate may may not be the sustainable yield of the well. Sustainable yield does not include the reservoir of the well casing.*

7. WELL LOG:

Depth, Feet From	Depth, Feet To	Material: Color/rock and type/descriptor (example: blue/shale/hard, o gravel/water, or brown/sand/heaving)
0	1	TOP SOIL
1	48	SAND, GRAVEL, BOULDERS
48	56	SAND, GRAVEL, W.B. – 15 GPM

☐ ADDITIONAL SHEETS ATTACHED

8. DATE WELL COMPLETED: 10/31/04

9. *REMARKS:* ___

10. DRILLER/CONTRACTOR'S CERTIFICATION:
All work performed and reported in this well log is in compliance with the Montana well construction standards. This report is true to the best of my knowledge.
Name, firm, or corporation (print) AQWA DRILLING, LLC
Address 594 SHERIDAN DRIVE, HAMILTON, MT 59840
Signature ___
Date 11/4/04 License no. 589

Form No. 603 R2-99

MONTANA WELL LOG REPORT

Well ID#

This log reports the activities of a licensed Montana well driller and serves as the official record of work done within the borehole and casing and describes the amount of water encountered. **This form is to be completed by the driller and filed with DNRC within 60 days of completion of the work. Acquiring Water Rights is the well owner's responsibility and is not accomplished by the filing of this report.** Well log information is stored in the Groundwater Information Center at the Montana Bureau of Mines and Geology (Butte) and water right information is stored in the Water Rights Bureau records (Helena). For fields that are not applicable, enter NA. ***Optional fields are in Italics.*** Record additional information in the REMARKS section.

1. **WELL OWNER:**
   Name ERIC AND DIANA HENDRICKSEN #20004
   Mailing address 626 BITTERROOT DRIVE
   FLORENCE, MT 59833

2. **WELL LOCATION:** List ¼ from smallest to largest
   ___ ¼ NW ¼ NW ¼ SE ¼ Section 6
   Township 10 N Range 19 W County Ravalli
   Lot ___ *Tract/Blk* ___ *Subdivision Name* ___
   Well Address 8 MILE/LOWER WOODCHUCK
   GPS ☐ *Yes* ☑ *No*
   Latitude ___ *Longitude* ___
   Error as reported by GPS locator (± feet)
   Horizontal datum ☐ *NAD27* ☑ *WGS84*

3. **PROPOSED USE:** ☐ Domestic ☐ Stock ☐ Irrigation
   ☐ Public water supply ☐ Monitoring Well ☑ Other: TEST WELL

4. **TYPE OF WORK:**
   ☑ New well ☐ Deepen existing well ☐ Abandon existing well
   Method: ☐ Cable ☑ Rotary ☐ Other: ___

5. **WELL CONSTRUCTION DETAILS:**
   Borehole:
   Dia. 6 in. from 0 ft to 200 ft.
   Dia. ___ in. from ___ ft to ___ ft.
   Dia. ___ in. from ___ ft to ___ ft.
   Casing:
   Steel: Wall thickness: 0.25" ☐ Threaded ☑ Welded
   Dia. 6 in. from +1.5 ft. to 100 ft.
   Dia. ___ in. from ___ ft. to ___ ft.

   Plastic: Pressure Rating ___ lbs. ☐ Threaded ☑ Welded
   Dia. 4 in. from 80 ft to 200 ft.

   Perforations/Slotted Pipe:
   Type of perforator used SKILL SAW
   Size of perforations/slots 1/8 in. by 6 in.
   20 no. of perforations/slots from 180 ft. to 200 ft.
   ___ no. of perforations/slots from ___ ft. to ___ ft.
   Screens: ☐ Yes ☑ No
   Material ___
   Dia. ___ Slot size ___ from ___ ft. to ___ ft.
   Dia. ___ Slot size ___ from ___ ft. to ___ ft.
   Gravel Packed: ☐ Yes ☑ No
   Size of gravel ___
   Gravel placed from ___ ft. to ___ ft.
   Packer: ☐ Yes ☑ No
   Type ___ Depth(s) ___
   Grout: Material used: Bentonite
   Depth from ___ ft. to ___ ft. OR ☑ Continuous feed

6. **WELL TEST DATA:**
   A well test is required for all wells. *(See details on well log report cover.)*
   ☑ Static water level 182 ft. below top of casing or
   ☐ Closed-in artesian pressure ___ psi.
   How was test flow measured:
   Bucket/stopwatch, weir, flume, flow meter, etc BUCKET/STOPWATCH
   Zone groundwater closure area only - Water Temperature ___ °F
   ☐ AQUIFER TEST DATA FORM ATTACHED

   Test - 1 hour minimum
   Drawdown is the amount water level is lowered below static level.
   All depth measurements shall be from the top of the well casing.
   Time of recovery is hours/minutes since pumping stopped.
   Air test*
   0 gpm with drill stem set at ___ ft. for ___ hour(s)
   Time of recovery ___ mins. Recovery water level ___

   OR Bailer test*
   ___ gpm with ___ ft. of drawdown after ___ hours
   Time of recovery ___ hrs/min. Recovery water level ___

   OR Pump test*
   Depth pump set for test ___ ft.
   ___ gpm pump rate with ___ ft. of drawdown after ___ hrs pumpi
   Time of recovery ___ hrs/min. Recovery water level ___

   OR Flowing Artesian*
   ___ gpm for ___ hours
   Flow controlled by ___

   **During the well test the discharge rate shall be as uniform as possible. This rate may may not be the sustainable yield of the well. Sustainable yield does not include the reservoir of the well casing.*

7. **WELL LOG:**

Depth, Feet From	Depth, Feet To	Material: Color/rock and type/descriptor (example: blue/shale/hard, or brown gravel/water, or brown/sand/heaving)
0	1	TOP SOIL
1	36	SAND, GRAVEL
36	54	TAN ASH CEMENTED GRAVEL, BOULDERS
54	80	TAN ASH
80	89	TAN ASH CEMENTED GRAVEL AND BOULDERS
89	110	TAN ASH CEMENTED SAND AND GRAVEL
110	135	TAN ASH
135	150	TAN ASH CEMENTED SAND AND GRAVEL, GRAY
150	180	TAN ASH CEMENTED SAND AND GRAVEL, DARK
180	195	SAND AND GRAVEL, W.B.
195	200	CLAY

☐ ADDITIONAL SHEETS ATTACHED

8. **DATE WELL COMPLETED:** 10/31/04

9. ***REMARKS:*** ___

10. **DRILLER/CONTRACTOR'S CERTIFICATION:**
All work performed and reported in this well log is in compliance with the Montana well construction standards. This report is true to the best of my knowledge.
Name, firm, or corporation (print) AQWA DRILLING, LLC
Address 594 SHERIDAN DRIVE, HAMILTON, MT 59840
Signature ___
Date 11/4/04 License no. 589

Form No. 603 R2-99

MONTANA WELL LOG REPORT

Well ID#

This log reports the activities of a licensed Montana well driller and serves as the official record of work done within the borehole and casing and describ[illegible]e amount of water encountered. **This form is to be completed by the driller and filed with DNRC within 60 days of completion of the work.** Acqu[illegible] Water Rights is the well owner's responsibility and is not accomplished by the filing of this report. Well log information is stored in the Groundwa[illegible] information Center at the Montana Bureau of Mines and Geology (Butte) and water right information is stored in the Water Rights Bureau records (Helena). [illegible] fields that are not applicable, enter NA. ***Optional fields are in italics.*** Record additional information in the REMARKS section.

1. WELL OWNER:
   Name ERIC AND DIANA HENDRICKSEN #20005
   Mailing address 626 BITTERROOT DRIVE
   FLORENCE, MT 59833

2. WELL LOCATION: List ¼ from smallest to largest
   ___ ¼ NW ¼ NW ¼ SE ¼ Section 6
   Township 10 N Range 19 W County Ravalli
   Lot ___ Tract/Blk ___ Subdivision Name ___
   Well Address 8 MILE/LOWER WOODCHUCK
   GPS ☐ Yes ☑ No
   Latitude ___ Longitude ___
   Error as reported by GPS locator (± feet)
   Horizontal datum ☐ NAD27 ☑ WGS84

3. PROPOSED USE: ☐ Domestic ☐ Stock ☐ Irrigation
   ☐ Public water supply ☐ Monitoring Well ☑ Other: TEST WELL

4. TYPE OF WORK:
   ☑ New well ☐ Deepen existing well ☐ Abandon existing well
   Method: ☐ Cable ☑ Rotary ☐ Other: ___

5. WELL CONSTRUCTION DETAILS:
   Borehole:
   Dia. 5 in. from 0 ft. to 40 ft.
   Dia ___ in. from ___ ft. to ___ ft.
   Dia ___ in. from ___ ft. to ___ ft.
   Casing:
   Steel Wall thickness: 0.25" ☐ Threaded ☑ Welded
   Dia. 5 in. from +1.5 ft. to 40 ft.
   Dia. ___ in. from ___ ft. to ___ ft.

   Plastic. Pressure Rating ___ lbs. ☐ Threaded ☑ Welded
   Dia. ___ in. from ___ ft. to ___ ft.

   Perforations/Slotted Pipe:
   Type of perforator used TORCH
   Size of perforations/slots 1/8 in. by 5 in.
   10 no. of perforations/slots from 35 ft. to 40 ft.
   ___ no. of perforations/slots from ___ ft. to ___ ft.
   Screens: ☐ Yes ☑ No
   Material ___
   Dia. ___ Slot size ___ from ___ ft. to ___ ft.
   Dia. ___ Slot size ___ from ___ ft. to ___ ft.
   Gravel Packed: ☐ Yes ☑ No
   Size of gravel ___
   Gravel placed from ___ ft. to ___ ft.
   Packer: ☐ Yes ☑ No
   Type ___ Depth(s) ___
   Grout: Material used: Bentonite
   Depth from ___ ft. to ___ ft. OR ☑ Continuous feed

6. WELL TEST DATA:
   A well test is required for all wells. *(See details on well log report cover.)*
   ☑ Static water level 24 ft. below top of casing or
   ☐ Closed-in artesian pressure ___ psi.
   How was test flow measured:
   bucket/stopwatch, weir, flume, flow meter, etc BUCKET/STOPWATCH
   Yellowstone groundwater closure area only - Water Temperature ___ °F
   ☐ AQUIFER TEST DATA FORM ATTACHED

   Test - 1 hour minimum
   Drawdown is the amount water level is lowered below static level.
   All depth measurements shall be from the top of the well casing.
   Time of recovery is hours/minutes since pumping stopped.
   Air test"
   4 gpm with drill stem set at 40 ft. for 1 hour(s)
   Time of recovery 30 mins. Recovery water level 24 ft

   OR Bailer test"
   ___ gpm with ___ ft. of drawdown after ___ hours
   Time of recovery ___ hrs/min. Recovery water level ___ ft

   OR Pump test"
   Depth pump set for test ___ ft.
   ___ gpm pump rate with ___ ft. of drawdown after ___ hrs pumpi[illegible]
   Time of recovery ___ hrs/min. Recovery water level ___

   OR Flowing Artesian"
   ___ gpm for ___ hours
   Flow controlled by ___

   "During the well test the discharge rate shall be as uniform as possible. This rate may may not be the sustainable yield of the well. Sustainable yield does not include the reservoir of the well casing.

7. WELL LOG:

Depth, Feet From	To	Material: Color, rock and type/descriptor (example: blue/shale/hard, o[illegible] gravel/water, or brown/sand/heaving)
0	1	TOP SOIL
1	24	SAND, GRAVEL, BOULDERS
24	40	SAND, GRAVEL, GRAY CLAY, W.B. – 4 GPM

☐ ADDITIONAL SHEETS ATTACHED

8. DATE WELL COMPLETED: 10/31/04

9. *REMARKS:* ___

10. DRILLER/CONTRACTOR'S CERTIFICATION:
All work performed and reported in this well log is in compliance with the Montana well construction standards. This report is true to the best of my knowledge.
Name, firm, or corporation (print) AQWA DRILLING, LLC
Address 594 SHERIDAN DRIVE, HAMILTON, MT 59840
Signature ___
Date 11/4/04 License no. 589

Form No. 503 R2-99

MONTANA WELL LOG RI DRT

Well ID#

This log reports the activities of a licensed Montana well driller and serves as the official record of work done within the borehole and casing and describes the amount of water encountered. This form is to be completed by the driller and filed with DNRC within 60 days of completion of the work. Acquiring water Rights is the well owner's responsibility and is not accomplished by the filing of this report. Well log information is stored in the Groundwater Information Center at the Montana Bureau of Mines and Geology (Butte) and water right information is stored in the Water Rights Bureau records (Helena). For fields that are not applicable, enter NA. *Optional fields are in italics.* Record additional information in the REMARKS section.

1. WELL OWNER:
Name ERIC AND DIANA HENDRICKSEN #20006
Mailing address 626 BITTERROOT DRIVE
FLORENCE, MT 59833

2. WELL LOCATION: List ¼ from smallest to largest
____ ¼ NW ¼ NW ¼ SE ¼ Section 6
Township 10 N Range 19 W County Ravalli
Lot ____ *Tract/Blk* ____ *Subdivision Name* ____
Well Address 8 MILE/LOWER WOODCHUCK
GPS ☐ *Yes* ☑ *No*
Latitude ____ *Longitude* ____
Error as reported by GPS locator (± feet)
Horizontal datum ☐ *NAD27* ☑ *WGS84*

3. PROPOSED USE: ☐ Domestic ☐ Stock ☐ Irrigation
☐ Public water supply ☐ Monitoring Well ☑ Other: TEST WELL

4. TYPE OF WORK:
☑ New well ☐ Deepen existing well ☐ Abandon existing well
Method: ☐ Cable ☑ Rotary ☐ Other: ____

5. WELL CONSTRUCTION DETAILS:
Borehole:
Dia. 6 in. from 0 ft. to 480 ft.
Dia. ____ in. from ____ ft. to ____ ft.
Dia. ____ in. from ____ ft. to ____ ft.
Casing:
Steel Wall thickness: 0.25" ☐ Threaded ☑ Welded
Dia 6 in. from +1.5 ft. to 377 ft.
Dia ____ in. from ____ ft. to ____ ft.

Plastic Pressure Rating ____ lbs. ☐ Threaded ☑ Welded
Dia. ____ in. from ____ ft. to ____ ft.

Perforations/Slotted Pipe:
Type of perforator used ____
Size of perforations/slots ____ in. by ____ in.
____ no. of perforations/slots from ____ ft. to ____ ft.
____ no. of perforations/slots from ____ ft. to ____ ft.
Screens: ☐ Yes ☑ No
Material ____
Dia. ____ Slot size ____ from ____ ft. to ____ ft.
Dia. ____ Slot size ____ from ____ ft. to ____ ft.
Gravel Packed: ☐ Yes ☑ No
Size of gravel ____
Gravel placed from ____ ft. to ____ ft.
Packer: ☐ Yes ☑ No
Type ____ Depth(s) ____
Grout: Material used: Bentonite
Depth from ____ ft. to ____ ft. OR ☑ Continuous feed

6. WELL TEST DATA:
A well test is required for all wells. *(See details on well log report cover.)*
☑ Static water level 105 ft. below top of casing or
☐ Closed-in artesian pressure ____ psi.
How was test flow measured:
cket/stopwatch, weir, flume, flow meter, etc BUCKET/STOPWATCH
stone groundwater closure area only - Water Temperature ____ °F
☐ AQUIFER TEST DATA FORM ATTACHED

Test - 1 hour minimum
Drawdown is the amount water level is lowered below static level.
All depth measurements shall be from the top of the well casing.
Time of recovery is hours/minutes since pumping stopped.
Air test*
1 gpm with drill stem set at 480 ft. for 1 hour(s)
Time of recovery 4 hrs. Recovery water level 105

OR Bailer test*
____ gpm with ____ ft. of drawdown after ____ hours
Time of recovery ____ hrs/min. Recovery water level ____

OR Pump test*
Depth pump set for test ____ ft.
____ gpm pump rate with ____ ft. of drawdown after ____ hrs pump
Time of recovery ____ hrs/min. Recovery water level ____

OR Flowing Artesian*
____ gpm for ____ hours
Flow controlled by ____

"During the well test the discharge rate shall be as uniform as possible. This rate may may not be the sustainable yield of the well. Sustainable yield does not include the reservoir of the well casing.

7. WELL LOG:

Depth, Feet From	To	Material: Color/rock and type/descriptor (example: blue/shale/hard, or brown gravel/water, or brown/sand/heaving)
0	1	TOP SOIL
1	12	SAND AND GRAVEL
12	30	TAN ASH
30	54	ASH CEMENTED SAND AND GRAVEL
54	76	SAND, GRAVEL, ASH. W.B. – 1/4 GPM
76	94	TAN ASH
94	115	TAN ASH GRAVEL
115	135	TAN ASH
135	175	ASH, SAND AND GRAVEL
175	195	TAN ASH
195	230	TAN ASH CEMENTED SAND, GRAVEL AND BOULDERS
230	312	BLUE CLAY
312	370	PINK ROCK, DECOMPOSING
370	480	ROCK

☐ ADDITIONAL SHEETS ATTACHED
8. DATE WELL COMPLETED: 10/31/04
9. *REMARKS:* ____

10. DRILLER/CONTRACTOR'S CERTIFICATION:
All work performed and reported in this well log is in compliance with the Montana well construction standards. This report is true to the best of my knowledge.
Name, firm, or corporation (print) AQWA DRILLING, LLC
Address 594 SHERIDAN DRIVE HAMILTON, MT 59840
Signature ____
Date 11/4/04 License no. 569

Montana DNRC P.O. BOX 201601 HELENA, MT 59620-1601 444-6610

MBMG ID #

EXHIBIT A-13

Montana Fish Wildlife & Parks

Region 2 Office
3201 Spurgin Road
Missoula, MT 59804-3101
406-542-5500
July 19, 2005

Ryan Salisbury
WGM Group, Inc.
PO Box 16027
Missoula, MT 59808-6027

Dear Mr. Salisbury:

Reference: Aspen Springs--Major (643-lot) subdivision proposed for Eightmile Creek area, northeast of Florence

We offered previous comments (March 9, 2005 letter, attached, hereafter "earlier letter") on this subdivision, based on an earlier version of the plat. Our current comments are based on review of the project summary, environmental assessment, covenants, and preliminary plat for this subdivision, received mid- to late June.

Overall, we note few and only minor changes in the two versions of the plat we have reviewed. Therefore, with the exception of what we address below, we also reaffirm our comments in our earlier letter.

1. Although adjacent to existing subdivisions, the Aspen Springs project is not an infilling type of development. Rather, it expands the footprint of development up onto surrounding open hillsides and ridges particularly favored by deer and elk. As pointed out on page 17 of the Environmental Assessment, "Extensive suburban development on the south boundary of the project area has displaced deer, which now occupy the project area." The Aspen Spring project would usurp habitat and further displace deer. This was why our earlier letter pointed out that the portion of the subdivision of most concern is the northeastern-most 28 lots (indicated on the newer plat as phase numbers 15 and 16). In addition to those lots being the farthest up the ridge, access is proposed with two crossings of natural drainage features that would compromise their suitability as both habitat and movement corridors. MFWP maintains that eliminating or moving the 28 lots in phases 15 and 16 would realize notable mitigation for the overall impacts to wildlife.

2. While identifying the 28 lots (phases 15 and 16) as being of "most benefit to wildlife by moving or eliminating" in our earlier letter (comment #2), we also mentioned two other areas as being of most concern. One was the "approximately 40 lots on the east side" (now portions of phases 30 through 33). But we note that 4 new lots have actually been added to the northern part of phase 33 in the newer plat version, thus effectively *increasing* the number and area of lots in the northeastern corner of this subdivision. We wonder the reason for this?

3. We also mentioned (comment #2, earlier letter) the 15 northwestern-most lots (northern portions of what are now phases 14 and 18) as being of concern. We appreciate that 6 of these lots (NW corner of phase 14), as well as the associated road, have been removed.

4. We are glad to see the inclusion of common areas in the project design. Those with the highest mitigation value to deer, elk and other wildlife would be ridges and hillsides around the edges of the project (88.2 total acres in phase numbers 14, 17, 32 and 33, as listed in the "Common Area Table" of the preliminary plat). The remaining 83.3 acres in smaller common areas within the heart of the subdivision would likely be of minimal real value to wildlife as usable habitat, although certainly those maintained along natural drainage features would likely be used as movement corridors, especially by white-tailed deer.

5. We note that 2 of the 3 southeastern-most lots (phase 26)--that we mentioned in our earlier letter as being platted over a natural drainage feature (running adjacent to the southern boundary of the subdivision)--have been removed. We appreciate this change in the plat. Along these lines, we would also encourage you to reconsider lots B154-B156 (phase 25), which also appear to have a drainage feature running from east to west through them.

6. We appreciate the inclusion of wildlife considerations (Sec. 6.v.) in the covenants. However, we strongly believe that "living with wildlife" issues should be conveyed to future residents for this subdivision in a more detailed manner in the covenants, in order to help residents and the Aspen Springs Homeowner's Association deal with and avoid potential wildlife issues. We have attached a copy of our recommended covenants for the "wildlife" section for this subdivision. (Please note that this version has minor changes over what we proposed in our earlier letter, so please use this current.)

7. Although MFWP publishes a number of brochures along the lines of "Living with Deer [Skunks, Magpies, etc.]" and provides this information on our website (www.fwp.mt.gov), we believe the "Living with Wildlife" brochure referred to in Aspen Springs' proposed wildlife section is a cooperative publication of the Missoula County Office of Planning and Grants and Brown Bear Resources.

8. Again, we recommend that the Amendment section (15) be changed to indicate that covenants dealing with Animals, Trash and Garbage, and Wildlife cannot be changed without the concurrence of the governing body (County Commissioners). This

would help ensure that these guidelines will remain in place for current and future residents of this subdivision.

Thank you for providing the opportunity for MFWP to comment on this subdivision.

Sincerely,

/s/ Mack Long

Mack Long
Regional Supervisor

ML/sr

Enc: Letter to WGM dated March 9, 2005
Recommended "Living with Wildlife" covenants

C: Ravalli County Planning Department, Attn: Karen Hughes, 215 S. 4 St., Ste. F, Hamilton, MT 59840

Covenants for Aspen Springs subdivision, suggested by Montana Fish, Wildlife & Park; Missoula; March 9, 2005

Section 6.v. Living with Wildlife

Homeowners must accept the responsibility of living with wildlife, must accept responsibility for protecting their vegetation from damage, and must confine their pets and properly store garbage, pet food, and other potential attractants. Homeowners must be aware of potential problems associated with the occasional presence of wildlife such as deer, elk, black bear, mountain lion, coyote, fox, skunk, raccoon and magpie. Please contact the Montana Fish, Wildlife & Parks office in Missoula (3201 Spurgin Road, Missoula, MT 59804) for brochures that can help homeowners "live with wildlife." Alternatively, see the Education portion of MFWP's web site at www.fwp.mt.gov.

The following covenants are designed to help minimize problems that homeowners could have with wildlife, as well as helping homeowners protect themselves, their property and the wildlife that Montanans value.

i. Homeowners must be aware of the potential for **vegetation damage by wildlife, particularly from deer** feeding on green lawns, gardens, flowers, ornamental shrubs and trees in this subdivision. Homeowners should be prepared to take the responsibility to plant non-palatable vegetation or protect their vegetation (fencing, netting, repellents) in order to avoid problems. Also, consider landscaping with native vegetation that is less likely to suffer extensive feeding damage by deer.

ii. **Gardens and fruit trees** can attract wildlife such as deer and bears. Keep produce and fruit picked and off the ground, because rotting vegetable material can attract bears and skunks. To help keep wildlife such as deer out of gardens, fences should be 8 feet or taller. Netting over gardens can help deter birds from eating berries.

iii. **Garbage** should be stored in secure bear-resistant containers or indoors to avoid attracting animals such as bears, raccoons, dogs, etc. It is best not to set garbage cans out until the morning of garbage pickup.

iv. **Do not feed wildlife** or offer supplements (such as salt blocks), attractants, or bait for deer or other wildlife. Feeding wildlife results in unnatural concentrations of animals that could lead to overuse of vegetation and disease transmission. Such actions unnecessarily accustom wild animals to humans, which can be dangerous for both. It is against state law (MCA 87-3-130) to provide supplemental feed attractants if it results in a "concentration of game animals that may potentially contribute to the transmission of disease or that constitutes a threat to public safety." Also, homeowners must be aware that deer might occasionally attract mountain lions to the area.

v. **Bird feeders** attract bears. If used, bird feeders should: a) be suspended a minimum of 20 feet above ground level, b) be at least 4 feet from any support poles

or points, and c) should be designed with a catch plate located below the feeder and fixed such that it collects the seed knocked off the feeder by feeding birds.

vi. **Pets** must be confined to the house, in a fenced yard, or in an outdoor kennel area when not under the immediate control of their owner(s), and not be allowed to roam as they can chase and kill big game and small birds and mammals. Under current state law it is illegal for dogs to chase hoofed game animals and the owner may also be held guilty (MCA 87-3-124).

vii. **Pet food** must be stored indoors, in closed sheds or in animal-resistant containers in order to avoid attracting wildlife such bears, mountain lions, skunks, raccoons, etc. **When feeding pets** do not leave food out overnight. Consider feeding pets indoors so that wild animals do not learn to associate food with your home.

viii. **Barbecue grills** should be stored indoors. Permanent, outdoor barbecues grills are discouraged in this subdivision. Keep all portions of the barbecues clean. Food spills and smells on the grill, lid, etc. can attract bears and other wildlife.

ix. Consider **boundary fencing** that is no higher than 3-1/2 feet (at the top rail or wire) and no lower than 18 inches (at the bottom rail or wire) in order to facilitate wildlife movement and help avoid animals such as deer and/or elk becoming entangled in the fence or injuring themselves when trying to jump the fence.

x. **Compost piles** can attract skunks and bears and should be avoided in this subdivision. If used they should be kept indoors or built to be wildlife-resistant. Compost piles should be limited to grass, leaves, and garden clippings, and piles should be turned regularly. Adding lime can reduce smells and help decomposition. Do not add food scraps. (Kitchen scraps could be composted indoors in a worm box with minimum odor and the finished compost can later be added to garden soil.)

EXHIBIT A-14

Montana Fish, Wildlife & Parks

Region 2 Office
3201 Spurgin Road
Missoula, MT 59804-3101
406-542-5500
June 20, 2006

Ryan Salisbury, Project Engineer
WGM Group, Inc.
PO Box 16027
Missoula, MT 59808-6027

Dear Mr. Salisbury:

Reference: Aspen Springs--Proposed major (643 lots on 393 acres) subdivision for Eightmile area, northeast of Florence

We offered previous comments (March 9, 2005 and July 19, 2005 letters, attached, hereafter "earlier letters") on this subdivision, based on earlier versions of the plat. Our current comments are based on review of the project summary, environmental assessment, covenants, and preliminary plat for this subdivision, and your most recent letter of May 19, 2006.

Again, overall we note few and only minor changes in the three versions of the plat we have reviewed. Therefore, with the exception of what we address below, we also reaffirm our comments and recommendations in our earlier letters.

1. FWP's major concern remains the impacts of the proposed subdivision on elk and deer winter range. The areas north and northeast of Aspen Springs are as yet largely undeveloped and are functional winter range. We reiterate that Aspen Springs is not an infilling type of development. Instead, it expands the footprint of development up onto surrounding open hillsides and ridges particularly favored by deer and elk. As noted in our earlier letters, FWP maintains that it would be necessary to eliminate or move the 28 lots in phases 15 and 16 to adequately mitigate for the overall impacts to wildlife.

2. We note in your letter of May 19, 2006 your variance request to be relieved from placing no-build/alteration zones on all portions of the property with slopes greater than 25%. We would support this if it were useful in making housing within the heart of the development more dense and moving houses down off the hill. However, if granting such a variance translates into more houses further up the slope of the hill, thereby expanding the development footprint, we recommend against it.

Thank you for the opportunity for MFWP to comment on this subdivision. We apologize that staff schedules precluded our being able to provide these comments earlier.

Sincerely,

Mack Long
Regional Supervisor

Enc: Letters to WGM dated March 9, 2005 and July 19, 2005

C: Ravalli County Planning Department, Attn: Ben Howell, 215 S. 4 St., Ste. F, Hamilton, MT 59840

EXHIBIT A-15

Montana Fish Wildlife & Parks

Region 2 Office
3201 Spurgin Road
Missoula, MT 59804-3101
406-542-5500
June 22, 2006

Ben Howell, Planner
Ravalli County Planning Department
215 S. 4th, Ste. F
Hamilton, MT 59840

Dear Mr. Howell:

Reference: Aspen Springs--Proposed major (643 lots on 393 acres) subdivision for Eightmile area, northeast of Florence

Yesterday we received your revised agency comment notice (dated June 19) for this subdivision, which includes a new variance request #2 relating to development roads connecting to rights-of-way in adjacent platted areas. We have no comment on this new variance request, but we understand the previous variance request #2 (relating to building on slopes greater than 25%) has now been removed. Therefore, we would like to withdraw our comment #2 concerning building slopes in our most recent letter (dated June 20).

Thank you as always for providing opportunity for MFWP to comment on subdivisions.

Sincerely,

/s/ Mack Long

Mack Long
Regional Supervisor

ML/sr

C: WGM Group, Inc., Attn: Ryan Salisbury, PO Box 16027, Missoula, MT 59808-6027

Renee Van Hoven

From: Laura Hendrix
Sent: Friday, June 23, 2006 2:45 PM
To: Renee Van Hoven
Cc: Karen Hughes; John Lavey; Shaun Morrell; Ben Howell
Subject: RE: Aspen Springs

Renee,

The utilities should be sufficiently buried so that they are not subject to scour in the event of flood flows in the drainage. Roads crossing the drainages would necessitate the installation of bridges or culverts. Culverts need to be adequately sized to convey possible floodwaters and should direct the flows to the stormwater drainage system. Bridges should be designed so as to avoid obstructing flood flows. Reasonable alternative transportation routes that do not cross these drainages should be explored by the developer.

Laura Hendrix, CFM
Ravalli County Floodplain Administrator
215 S 4th St. Suite F
Hamilton, MT 59840
406-375-6530 phone
406-375-6531 fax
lhendrix@ravallicounty.mt.gov

From: Renee Van Hoven
Sent: Friday, June 23, 2006 9:34 AM
To: Laura Hendrix
Cc: Karen Hughes; John Lavey; Shaun Morrell; Ben Howell
Subject: RE: Aspen Springs

Laura – what about utilities and roads over the natural drainages? For the most part, they are trying to avoid road and utilities over the drainages, but since many of the lots are on the eastern side of the main drainage, it's almost unavoidable.

Renee Van Hoven
Ravalli County Planning Department
215 S. 4th St., Suite F
Hamilton, MT 59840
(406)375-6530
rvanhoven@ravallicounty.mt.gov

From: Laura Hendrix
Sent: Thursday, June 22, 2006 3:48 PM
To: Renee Van Hoven
Cc: John Lavey; Shaun Morrell; Karen Hughes; Laura Hendrix
Subject: RE: Aspen Springs

Renee,

Yes, I agree that the development of structures in natural drainages could indeed have a negative impact on the natural environment. This development would also increase the flood hazard risk to those individuals living in the drainage. While the drainage does not have a perennially flowing watercourse, the drainage may be subject to flash flood events which could carry a significant amount of discharge in a short amount of time.

Although the drainages are not recognized as regulatory floodplains, the uncontrolled development of flood-prone lands substantially degrades the health, safety, and welfare of the community in the following ways:

(a) The owners, residents, customers, guests, and employees occupying homes, businesses and other structures located in flood-prone areas are placed at unreasonable risk of personal injury and property damage.
(b) Expensive and dangerous search, rescue and disaster relief operations may be necessary when developed properties are flooded.
(c) Roads, public facilities, and utilities associated with development may be damaged by flooding at great expense to taxpayers and rate payers.
(d) Flooding of developed properties may lead to demands that the government construct expensive and environmentally damaging projects to control flood waters.
(e) Normally flood-free lands are placed at risk of flooding when flood waters on natural flood-prone areas are obstructed, diverted, displaced or channelized by development.
(f) Water quality is degraded and important habitat for wildlife and fisheries is lost.

I would recommend the location of the lots (as indicated in blue) be seriously reconsidered by the developer. A no build/no alteration zone should be established at the location of these drainages.

Laura Hendrix, CFM
Ravalli County Floodplain Administrator
215 S 4th St, Suite F
Hamilton, MT 59840
406-375-6530 phone
406-375-6531 fax
lhendrix@ravallicounty.mt.gov

EXHIBIT A-17

United States Department of the Interior

JUN 1 2 2006
10-06-06-90%
Ravalli County Planning Dept.

BUREAU OF RECLAMATION
Ephrata Field Office
P. O. Box 815
Ephrata, Washington 98823

IN REPLY REFER TO:

EPH-2803
LND-6.00

JUN - 6 2006

Ms. Karen Hughes
Ravalli County Planning Department
215 South 4th Street, Suite F
Hamilton, MT 59840

Subject: Aspen Springs Subdivision in Sections 5 and 6, Township 10 North, Range 19 West, Principle Meridian, Ravalli County, Montana

Dear Ms. Hughes:

Thank you for allowing us the opportunity to re-examine this proposal in the context of the eight variances requested by the proponent. We have prepared this letter in response to the proponent's solicitation of additional comments which are needed for a June 7, 2006 plat evaluation meeting.

The Bureau of Reclamation has a continuing interest in reviewing land use applications to ensure that contemplated development does not encroach upon our existing property interests or adversely affect the Bitter Root Irrigation Project. We appreciate this additional opportunity to review and comment on the subject proposal.

The subject proposal was reviewed last year in consultation with the Bitter Root Irrigation District (District). Although this subdivision is within close proximity to the Bitterroot River, it does not appear to impact Reclamation or District facilities or property interests. As a result of this evaluation, we have no additional comment regarding this proposal. Please bear in mind, however, that Reclamation's "no comment" is based on the premise that no Reclamation or District facilities or property interests are affected by this proposal.

If you have any questions or comments, please contact Richard Honey, Realty Specialist, at 509-754-0267.

Sincerely,

William D. Gray

William D. Gray
Deputy Area Manager

cc: Mr. Gary Shatzer
Bitter Root Irrigation District

182 Lazy J Lane
Corvallis, MT 59828

Mr. Ryan Salisbury, P.E.
WGM Group, Inc
P.O. Box 16027
Missoula, MT 59808-6027

Renee Van Hoven

From: Brensdal, Bruce [bbrensdal@mt.gov]
Sent: Wednesday, June 21, 2006 3:17 PM
To: Renee Van Hoven
Cc: Preite, Tony; Poole, Andy; Leifer, Nancy; Burton, Anastasia
Subject: RE: Aspen Springs Public Hearing
Attachments: High Cost Memo.pdf

Renee:

We have decided to not participate in the public hearing on July 5, 2006 but instead have attached a memo we request staff incorporate into its report to the planning board.

Thanks for visiting with us about this process and helping us understand it. If you are ever in a position you need information about housing or even want us to come visit with your board let me know.

Bruce Brensdal
Montana Board of Housing - Executive Director
Housing Division - Administrator
301 South Park Ave RM 240
PO Box 200528
Helena MT 59620
406-841-2844
406-431-1845 (cell)
406-841-2841 (fax)
bbrensdal@mt.gov
www.housing.mt.gov

From: Renee Van Hoven [mailto:rvanhoven@ravallicounty.mt.gov]
Sent: Monday, June 19, 2006 1:20 PM
To: Brensdal, Bruce
Subject: Aspen Springs Public Hearing

Hi Bruce,

Attached is the three minute waiver form. You're welcome to fill it out and return it to me ahead of time or at the meeting. Also attached is a letter requesting comments from interested agencies. Unfortunately, our scanner is not working, but I'll send a vicinity map and a copy of the preliminary plat as soon as the scanner is fixed. I'm looking forward to receiving your comments.

Thanks,

Renee Van Hoven
Ravalli County Planning Department
215 S. 4th St., Suite F
Hamilton, MT 59840
(406)375-6530
rvanhoven@ravallicounty.mt.gov

MONTANA
Department of Commerce

MONTANA BOARD OF HOUSING
P O Box 200528 * Helena Montana 59620-0528
Phone 406-841-2840 * Fax 406-841-2841 * TDD 406-841-2702

Montana Board of Housing

Housing Affordability in High Growth Areas

The Montana Board of Housing (MBOH) is a state agency charged with the task of assisting low and moderate-income first-time homebuyers achieve the dream of homeownership by providing lower cost long-term financing than that available through market-rate housing loans. MBOH does not use any state tax dollars. Since 1977, MBOH has helped over 35,000 Montana families with over $2.1 billion in financing from the sale of tax exempt bonds. However, with slow-rising incomes and quickly rising homes prices, buying one's first home has become more challenging in recent years in parts of Montana where the demand for housing has outpaced supply.

MBOH's typical homebuyer is a hard-working Montana family whose average annual income is about $35,000. Allowing 25-30% of this income for the principle and interest portion of a mortgage payment, MBOH's average buyer can qualify for about $122,000-$146,000 towards the purchase of a home. The upward limit that MBOH programs can finance for a first mortgage is $200,160. Homes that fit under this price limitation are increasingly difficult to locate in much of western Montana. Without a supply of homes in this price range, these Montana families will be unable to move into homeownership.

In the most rapidly-growing areas of Montana, land costs contribute the greatest share of the increase in housing costs for those housing units available to our homebuyers. For example, it was not unusual for the lot beneath a modest home in an urban area to have cost about $15,000-$20,000 not too many years ago, but to be valued at $70,000 or more now. If new homes are to fit the price range of MBOH buyers, the land beneath the homes must be more affordable most likely resulting in smaller lots.

The characteristics of a community's housing stock determine who can afford to live and own a home in the community. All rapidly-growing communities need to consider higher density housing developments on communal water and sewer systems to offer the only opportunity for new construction homes to fit the incomes of many MBOH buyers.

We ask that all communities consider affordable housing as they wrestle with the issues of planning for the future.

For more information on the Montana Board of Housing visit our website at: www.housing.mt.gov .

1515 S. 14th Street W
Missoula, Montana 598

EXHIBIT A-19

May 23, 2006

ride the light
Qwest

Ryan Salisbury
WGM Group, Inc.
3021 Palmer
P.O. Box 16027
Missoula, MT 59808-6027

Dear. Mr. Salisbury:

Thank you for the variance information on the proposed Aspen Springs subdivision located off Lower Woodchuck Road in Florence, MT.

As previously communicated, Qwest Corporation will provide telecommunications service to this development under the terms and conditions of the Provisioning Agreement for Housing Development (PAHD). If the 33 phase/22 year variance is granted, Qwest would require a PAHD for each phase and would need to be contacted prior to the development of each phase to allow for a timely response.

At this time, the remaining variances do not appear to affect the provisioning of telecommunications service by Qwest. If you have any additional information or questions, please contact me on 406-543-2175.

Sincerely,

Dave Smith
Senior Design Engineer
1515 S 14th West
Missoula, MT 59801-4923

cc: Ravalli County Planning Ofc

NORTHWESTERN ENERGY
RIGHT-OF-WAY DEVELOPMENT PROVISIONS

1. NorthWestern Energy (hereinafter referred to as "Company") installs, operates, and maintains its natural gas transmission pipelines in accordance with the Department of Transportation's Code of Federal Regulations for the protection of public safety and the protection of its pipeline operations. Should a Developer/Landowner (hereinafter referred to as "Developer") propose plans to alter the area through which Company pipelines pass, causing the pipelines not to meet these standards, modifications to the pipelines or right-of-way will be made. The cost of such modifications will be borne by the Developer.

2. No buildings, engineering works, deep rooted plants, septic systems, or other similar permanent structures will be allowed over any portion of our easement unless the Company determines that the conditions described below have been met as appropriate.

3. Longitudinal road encroachment over the pipeline right-of-way is prohibited. Roads crossing the pipelines perpendicularly will be allowed only with Developer's execution of a Hold Harmless Agreement which releases Company from all damage to the asphalt and concrete associated with any maintenance performed on Company pipelines. All roads passing over Company pipelines where the pipeline depth is less than 48 inches (including borrow ditches) may require the installation of concrete coating around Company pipelines for the entire length that lies under the road. In addition, it may be necessary to lower or reroute the pipelines at the point of crossing to insure that they are not subjected to excessive stress from movement of traffic, or maintenance work. Any such modification to the pipelines will be made at Developer's expense.

4. At any point in the easement where the existing grade profile will be lowered by the removal of earth, Company pipelines must be lowered to a depth that provides a minimum cover of 36 inches (some areas may require additional cover) after final grading. Any lowering which is necessary shall be done at Developer's expense and shall include coating and wrapping the entire exposed portion of pipeline.

5. Construction of paved parking lots over Company pipelines will only be allowed if the construction of the parking lots meets the specifications as set forth by the Company. This may include, but may not be limited to, the installation of manholes in the pavement at Company specified distances for the purpose of gas leak detection.

6. All utilities that cross Company pipelines must pass underneath (unless determined by Company to be impractical) existing pipelines and maintain a minimum separation of 24"(inches). The crossing shall be as close to 90 degrees as practical and adequately marked on both sides of the pipeline. The markers shall be maintained in the future. Any future relocation of the utility pipeline due to Company's pipeline maintenance shall be done at the Developer's expense. If there are specific instances for which gravity flow utilities will not be able to comply with this requirement, please provide an accurate description of the proposed utility and the Company will be willing to discuss possible alternate solutions. Telephone, fiber optics and electric cable crossings must be encased in a conduit and marked with ditch tape. Concrete capping of a cable is an acceptable alternate to the use of a conduit. Any utilities that parallel Company pipelines will maintain a minimum separation distance of 25 feet from the utility's outside wall to the Company's pipeline outside wall.

7. If any facilities crossing Company pipelines are installed and constructed of a material requiring cathodic protection, an interference survey shall be made and necessary steps will be taken to prevent adverse impacts on either the Company pipeline, or the facility. This will be done at Developer's expense.

8. The Developer will allow no material or equipment to be used in the construction that would hinder or impair Company's ability to safely maintain and operate Company pipelines.

9. The Company retains the right to adequately mark Company pipelines with permanent pipeline markers to insure public safety and the future safe operation of the pipelines.

10. The Company must be provided with construction drawings for all work which will affect our pipeline easement, including a present plat and a profile (along the pipeline centerline) showing any grade work to be done. Upon receipt of these drawings the Company will prepare a cost estimate of any modifications to our pipelines that will be necessary.

11. Before proceeding with construction, Company requires that 100% of the cash equivalent of Company cost estimate be deposited with the Company prior to construction. The developer will be charged actual costs for design/construction as incurred by the Company and an overhead charge to cover procurement, accounting, and legal services, whether higher or lower than our estimated costs. Any part of the deposit not spent will be returned to the Developer or the Developer will be invoiced for amounts exceeding the cost estimates. Any pipeline construction work that is required shall be done by a company crew, one of the Company's maintenance contractors or another contractor acceptable to both parties. The Company reserves the right to have an inspector on the job to oversee all construction within our easement.

12. The Company requires a minimum of ten days written notice prior to any excavation, construction, or movement of equipment across our right of way so that Company pipelines can be staked to minimize the possibility of accidental damage.

13. The Developer/Landowner shall indemnify, defend and hold harmless the Company from and against any and all claims for injuries to person or persons or for damages to property arising directly or indirectly from work to be performed by the Developer/Landowner or those under contract to the Developer/Landowner.

14. No permanent structure will be built within 25 feet of Company pipeline without prior approval from Company.

I/WE HEREBY AGREE TO ABIDE BY THE ABOVE DEVELOPMENT PROVISIONS.

_____

Signature

_____

Printed Name and Title

_____

Company/Corporation/Entity Name Date

For questions regarding Right-of-Way Development Provisions, please contact either Dan Pfeifer @ 406-497-2393 office or 406-498-3007 cell or Marc Mullowney @ 406-497-2285 office or 406-490-6504 cell or Marvin Balback @ 406-497-2302 office or 406-490-5868 cell. After hours, please contact our 24-hour Gas Control Center, phone 406-782-6250.

PROJECT

DESCRIPTION:_____

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